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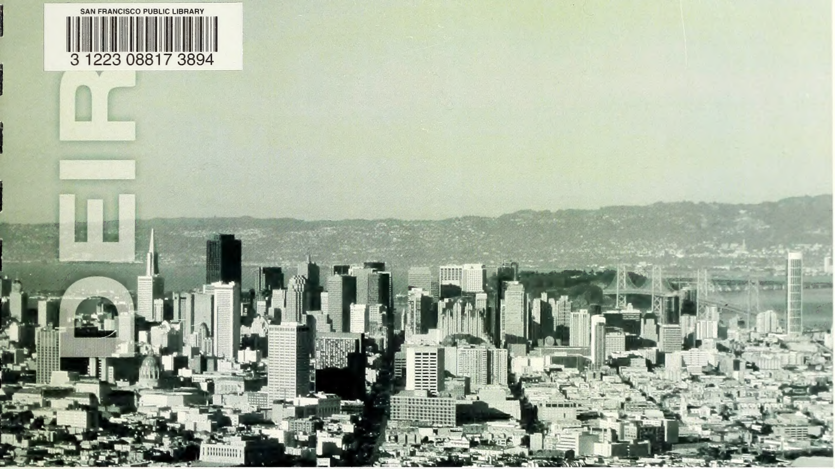

DRAFT ENVIRONMENTAL IMPACT REPORT

San Francisco 2004 and 2009 Housing Element

Volume II: Draft EIR (Section V.H to Section VIII)

PLANNING DEPARTMENT
CASE NO. **2007.1275E**

STATE CLEARINGHOUSE NO. 2008102033

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354.353
N845d
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v.2

SAN FRANCISCO
PLANNING
DEPARTMENT

Draft EIR Publication Date:	**June 30, 2010**
Draft EIR Public Hearing Date:	**August 5, 2010**
Draft EIR Public Comment Period:	**June 30, 2010 – August 16, 2010**

Written comments should be sent to:
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V. ENVIRONMENTAL SETTING AND IMPACTS
H. AIR QUALITY

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to the applicable air quality plan, air quality standards, criteria pollutants, sensitive receptors, and objectionable odors.

BACKGROUND

Air pollutant emissions within the Bay Area are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples are boilers or combustion equipment that produces electricity or generates heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products such as barbeque lighter fluid and hair spray. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, and self-propelled construction equipment. Mobile sources account for the majority of the air pollutant emissions within the San Francisco Bay Area Air Basin (Basin). Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The national and state ambient air quality standards have been set at levels where concentrations could be generally harmful to human health and welfare, and to protect the most sensitive persons from illness or discomfort with a margin of safety.

The air pollutants for which national and state standards have been promulgated and which are most relevant to air quality planning and regulation in the Bay Area include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb). Both national and state standards are summarized in Table V.H-1. In addition, toxic air contaminants (TAC) and the complex mixture of traffic-related pollutants (TRPs) are of concern. A brief description of each of these pollutants including the associated health effects is described below.

Ozone (O_3). O_3, a colorless toxic gas, is the chief component of urban smog. O_3 enters the blood stream and interferes with the transfer of oxygen, depriving sensitive tissues in the heart and brain of oxygen. Although O_3 is not directly emitted, it forms in the atmosphere through a chemical reaction between reactive organic gas (ROG) and nitrogen oxide (NO) and NO_2, collectively referred to as nitrogen oxides (NO_x) under sunlight. In general, ROG and NO_x are primarily emitted from automobiles and industrial sources. O_3 is present in relatively high concentrations within the Bay Area, and the damaging effects of photochemical smog are generally related to the concentration of O_3. The highest O_3 concentrations occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies.

Carbon Monoxide (CO). CO, a colorless and odorless gas, interferes with the transfer of oxygen to the brain. It can cause dizziness and fatigue, and can impair central nervous system functions. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. Automobile exhaust release approximately 70 percent of the CO in the Bay Area. A substantial amount also comes from burning wood in fireplaces and wood stoves. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. The highest CO concentrations measured in the Bay Area are typically recorded during the winter.

Nitrogen Dioxide (NO_2). NO_2, a reddish-brown gas, irritates the lungs. It can cause breathing difficulties at high concentrations. According to the U.S. Environmental Protection Agency (US EPA), scientific evidence links short-term N_2O exposures ranging from 30 minutes to 24 hours, with adverse respiratory effects including increased asthma symptoms, respiratory illness, more difficulty controlling asthma, and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly for at risk populations, including children, the elderly, and asthmatics. As stated earlier, NO and NO_2 are collectively referred to as nitrogen oxides (NO_x) and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10} (see discussion of PM_{10} below). Like O_3, NO_2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. Vehicle exhaust is the dominate urban emissions source of NO_2, and concentrations of NO_2 near major roads are appreciably higher than those measured at monitors in the current regional monitoring network. On January 22, 2010, the US EPA strengthened the health-based National Ambient Air Quality Standards (NAAQS) for NO_2.

Sulfur Oxides (SO_x). SO_x, primarily SO_2, are a product of high-sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, in industries, and for domestic heating. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 concentrations have been reduced to levels well below the state and national standards, but further reductions in emissions are needed to attain compliance with standards for PM_{10}, of which SO_2 is a contributor.

Suspended Particulate Matter ($PM_{2.5}$ and PM_{10}). Particulate matter pollution consists of very small liquid and solid particles suspended in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when industry and gases emitted from motor vehicles undergo chemical reactions in the atmosphere. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter. PM_{10} refers to particulate matter less than 10 microns in diameter, about one/seventh the thickness of a human hair. $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. Major sources of PM_{10} include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. In addition, $PM_{2.5}$ is formed in the atmosphere from gases such as SO_2, NO_x, and volatile organic compounds (VOCs). PM_{10} and $PM_{2.5}$ pose a greater health risk than larger-size particles. Whereas larger particles tend to collect in the upper portions of the respiratory system, $PM_{2.5}$ are so tiny that they can penetrate deeper into the lungs and damage lung tissues. PM_{10} and $PM_{2.5}$ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. According to the California Air Resources Board, there is scientific consensus that chronic exposure to particulate matter at current exposure levels shortens life expectancy.[1] Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead (Pb). Pb occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne Pb in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so the majority of such combustion emissions are associated with off-road vehicles such as race cars. However, because it was emitted in large amounts from vehicles when leaded gasoline was used for on-road motor vehicles, Pb is present in many soils and can get resuspended in the air. Other sources of Pb include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and the use of secondary Pb smelters. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

State standards have been promulgated for other air pollutants, including SO_4, hydrogen sulfide, and visibility reducing particles. The state also recognizes vinyl chloride as a TAC with an undetermined threshold level of exposure for adverse health effects. Vinyl chloride and hydrogen sulfide emissions are usually generated from mining, milling, refining, smelting, landfills, sewer plants, cement manufacturing, or the manufacturing or decomposition of organic matter. The state standards for sulfate and visibility reducing particles are not exceeded anywhere in the Basin. Table V.H-1 includes the California Ambient Air Quality Standards (CAAQS) currently in effect for each of the criteria pollutants as well as other pollutants recognized by the state. As shown in Table V.H-1, for many pollutants the CAAQS include more stringent standards than the national ambient air quality standards.

Table V.H-1
Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards	Federal Standards [a]	
			Primary [b,c]	Secondary [b,d]
Ozone	8-hour	0.07 ppm (137 $\mu g/m^3$)	0.075 ppm (147 $\mu g/m^3$)	Same as primary
	1-hour	0.09 ppm (180 $\mu g/m^3$)	—	

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[1] California Air Resources Board (ARB). 2002. Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates. California Air Resource Board (CARB) Methodology for Estimating Premature Deaths Associated with Long-term Exposure to Fine Airborne Particulate Matter in California: Staff Report. Sacramento: ARB October 24, 2008.

Table V.H-1
Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards	Federal Standards (a)	
			Primary (b,c)	Secondary (b,d)
Carbon monoxide	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
Nitrogen dioxide	Annual	0.030 ppm (57 μg/m^3)	0.053 ppm (100 μg/m^3)	Same as primary
	1-hour	0.18 ppm (339 μg/m^3)	0.10 ppm	
Sulfur dioxide	Annual	—	0.03 ppm (80 μg/m^3)	—
	24-hour	0.04 ppm (105 μg/m^3)	0.14 ppm (365 μg/m^3)	—
	3-hour	—	—	0.5 ppm (1,300 μg/m^3)
	1-hour	0.25 ppm (655 μg/m^3)	—	—
PM$_{10}$	Annual	20 μg/m^3	—	Same as primary
	24-hour	50 μg/m^3	150 μg/m^3	
PM$_{2.5}$	Annual	12 μg/m^3	15 μg/m^3	Same as primary
	24-hour	—	35 μg/m^3	
Lead	Calendar quarter	—	1.5 μg/m^3	Same as primary
	30-day average	1.5 μg/m^3	—	—

Notes: (a) Standards, other than for ozone and those based on annual averages, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

(b) Concentrations are expressed first in units in which they were promulgated. Equivalent units given in parentheses.

(c) Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than 3 years after that state's implementation plan is approved by the U.S. EPA.

(d) Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Toxic Air Contaminants

Toxic air contaminants (TACs) collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health, including carcinogenic effects. They include both organic and inorganic chemical substances that may be emitted from a variety of common sources including gasoline stations, motor vehicles, dry cleaners, industrial operations, paint operations, and research and teaching facilities. Unlike "criteria" pollutants, national or state ambient air quality standards have not been established for TACs. However, regulatory agencies address some sources of TACs through technological emissions controls (e.g., vehicle and industrial controls).

Diesel exhaust is the predominant TAC in urban air and is believed to represent about two-thirds of the estimated cancer risk from all other TACs (based on the statewide average). According to the California ARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. Occupational exposure to diesel exhaust has been linked to lung cancer in humans through epidemiological studies.[2] [3] Individual chemical constituents in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the ARB, and are listed as carcinogens either under the State's Proposition 65 or under the federal Hazardous Air Pollutants programs.

The ARB established its statewide comprehensive air toxics program in the early 1980s. ARB created California's program in response to the Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) to reduce exposure to air toxics. ARB identifies 244 substances as TACs that are known or suspected to be emitted in California and have potential adverse health effects. ARB listed diesel exhaust as a recognized toxic air contaminant in 1999 based on its association with cancer in humans.

Traffic Related Pollutants

Engines exhaust, from both diesel and gasoline engines in roadway vehicles, is a complex mixture of particles and gases. As discussed above, vehicle emissions generate both criteria air pollutants such as CO, PM, and NOx as well as other non-criteria toxic air contaminants, including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, and diesel exhaust. Collectively these may be referred to as traffic related pollutants (TRPs).

While each constituent pollutant in engine exhaust may have a unique toxicological profile, health effects have been associated with proximity or exposure to TRPs *collectively* as a mixture.[4] Individual epidemiological studies have linked roadway proximity, or vehicle emissions, to impairments of lung function; [5], asthma symptoms;[6] [7], [8] medical visits for asthma;[9] asthma prevalence and incidence; [10] [11] [12] [13]

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[9] English P., *et al.* "Examining Associations Between Childhood Asthma and Traffic Flow Using a Geographic Information System." (1999) Environmental Health Perspectives 107(9): 761-767.

[10] McConnell R, Berhane K, Yao L, Jerrett M, Lurmann F, Gilliland F, Kunzli N, Gauderman J, Avol E, Thomas D, and Peter J, 2006. Traffic, susceptibility, and childhood asthma. Environmental Health Perspectives, 114:766-772.

[14] and ischemic heart disease.[15] [16] A Health Effects Institute (HEI) Report in 2008 concluded that "Evidence was 'sufficient' to infer a causal relationship between exposure to traffic-related air pollution and exacerbation of asthma and 'suggestive' to infer a causal relationship with onset of childhood asthma, non-asthma respiratory symptoms, impaired lung function, and total and cardiovascular mortality." [17]

The location of transportation facilities determines the spatial patterns of exposure to TRP emissions from vehicle sources in urban areas. A recent meta-analysis, based on 33 exposure studies and four pollutants (carbon dioxide, nitrogen oxides, particulates and ultra-fine particulates), found significant spatial difference exist in multiple traffic related pollutants relative to proximity to busy roadways.[18] [19]

In 2005, ARB issued guidance on preventing roadway related air quality conflicts, suggesting localities "avoid siting new sensitive land uses within 500 feet of a freeway [or other] urban roads with volumes of more than 100,000 vehicles/day."[20] However, there are no existing federal or state regulations to protect sensitive land uses from roadway air pollutants. In 2008, the City of San Francisco adopted amendments to the Health Code (discussed under "Regulatory Setting"), requiring new residential projects near high volume roadways be screened for TRP hazards, and where indicated, conduct an analysis of exposure and

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[11] Gauderman WJ, Avol E, Lurmann F, Kuenzli N, Gilliland F, Peters J, McConnell R. Childhood asthma and exposure to traffic and nitrogen dioxide. Epidemiology. 2005 Nov;16(6):737-43.

[12] Jerrett M, Shankardass K, Berhane K, Gauderman WJ, Künzli N, Avol E, Gilliland F, Lurmann F, Molitor JN, Molitor JT, Thomas DC, Peters J, McConnell R. Traffic-related air pollution and asthma onset in children: a prospective cohort study with individual exposure measurement. Environ Health Perspect. 2008 Oct;116(10):1433-8.

[13] Kim JJ, Huen K, Adams S, Smorodinsky S, Hoats A, Malig B, Lipsett M, Ostro B. Residential traffic and children's respiratory health. Environ Health Perspect. 2008 Sep;116(9):1274-9.

[14] McConnell R, Islam T, Shankardass K, Jerrett M, Lurmann F, Gilliland F, Gauderman J, Avol E, Kuenzli N, Yao L, Peters J, Berhane K. Childhood Incident Asthma and Traffic-Related Air Pollution at Home and School. Environ Health Perspect. 2010 Mar 22. [Epub ahead of print]

[15] Hoffmann B, Moebus S, Mohlenkamp S, Stang A, Lehmann N, Dragano N, Schmermund A, Memmesheimer M, Mann K, Erbel R, and Jockel KH, 2007. Residential exposure to traffic is associated with coronary atherosclerosis. Heinz Nixdorf Recall Study Investigative Group. Circulation, 116:489-496.

[16] Hoffmann B, Moebus S, Stang A, Beck EM, Dragano N, Mohlenkamp S, Schmermund A, Memmesheimer M, Mann K, Erbel R, and Jockel KH, 2006. Residence close to high traffic and prevalence of coronary heart disease. Heinz Nixdorf RECALL Study Investigative Group. European Heart Journal, 27:2696-2702.

[17] HEI (Health Effects Institute), 2009. "Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects." Special Report #17. Available: http://pubs.healtheffects.org/view.php?id=306.

[18] Zhu, Y et al. "Study of Ultra-Fine Particles Near A Major Highway With Heavy-Duty Diesel Traffic." Atmospheric Environment. 2002 ; 36:4323-4335.

[19] Zhou Y, and Levy JI, 2007. Factors influencing the spatial extent of mobile source air pollution impacts: a meta-analysis. BMC Public Health, 89:1-11.

[20] California Air Resources Board, 2005 Air Quality and Land Use Handbook: A Community Health Perspective, http://www.arb.ca.gov/ch/landuse.htm, accessed September 8, 2008.

mitigate hazards through design and ventilation. However, there are no existing federal or state regulations to protect sensitive land uses from roadway air pollutants.

Sensitive Receptors

Some population groups are considered more sensitive to air pollution than others. Sensitive receptors for air quality include children, the elderly, and the acutely and chronically ill. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive receptors to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential uses are considered sensitive because people spend a majority of time at home, so they could be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function.

ENVIRONMENTAL SETTING

Existing Air Pollutant Emissions in Local Vicinity

Air pollutant emissions are generated within the City by stationary and area-wide sources, such as space and water heating, landscape maintenance from leaf blowers and lawn mowers, consumer products, mobile sources, and primarily automobile traffic.

Roadways and intersections have the potential to generate localized high levels of CO, NO_2, and other TRPs. Localized areas where ambient concentrations exceed national and/or state standards are termed "hotspots." The Bay Area Air Quality Management District (BAAQMD) considers CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors, described above, to CO hotspots. Recent changes to Clean Air Act regulations will require enhancement of regional air quality monitoring networks to assess levels of NO_2 near roadways, but these changes have not yet been implemented. The San Francisco Department of Public Health (SFDPH) conducts local assessments and monitoring to assess the spatial variation in $PM_{2.5}$, NO_2, and TACs from roadway sources.

The BAAQMD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating localized pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to ambient CO air concentrations. For this analysis, localized CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the BAAQMD. The simplified procedure is intended as a screening analysis, which identifies a potential CO hotspot. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations. The emission factors used in the analysis have been updated using EMFAC2007.

Using the simplified CALINE4 screening procedure described above, the maximum 1-hour and 8-hour CO concentrations were calculated for ten of the 60 study intersections that were evaluated in the Transportation Impact Study (TIS).[21] Due to the large number of intersections, the ten intersections that would be most impacted based on their volume to capacity ratio (V/C) were selected and represent the worst-case traffic scenario. The results of these calculations are presented in Table V.H-2 for representative receptors located at each roadway edge as well as at 25, 50, and 100 feet from each roadway. The distances of 25, 50, and 100 feet from each roadway were selected because they represent locations where a person may be living or working for more than eight hours at a time. The national 1-hour CO ambient air quality standard is 35.0 ppm, and the state 1-hour CO ambient air quality standard is 20.0 ppm. The 8-hour national and state standards for localized CO concentrations are 9.0 ppm.

Table V.H-2
Existing Localized Carbon Monoxide Concentrations

	CO Concentrations in Parts Per Million [a]							
	Roadway Edge		25 feet		50 feet		100 feet	
Intersection	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
6. Geary Boulevard & Van Ness Avenue	7.2	3.4	6.7	3.0	6.6	2.9	6.3	2.7
16. 2nd Street and Folsom Street	6.8	3.0	6.4	2.8	6.2	2.7	6.1	2.6
17. 2nd Street and Bryant Street	7.4	3.5	6.8	3.1	6.5	2.9	6.3	2.7
24. 6th Street and Brannan Street	10.5	5.7	8.9	4.5	8.3	4.1	7.6	3.6
31. 16th Street and Potrero Street	7.6	3.6	6.9	3.2	6.7	3.0	6.4	2.8
41. Sloat Boulevard and 19th Avenue	11.0	6.0	9.2	4.8	8.5	4.3	7.8	3.8
42. Winston Drive and 19th Avenue	9.0	4.6	7.9	3.9	7.5	3.6	7.1	3.2
43. Junipero Serra Boulevard and 19th Avenue	12.3	7.0	10.3	5.5	9.5	5.0	8.6	4.3
50. Sunnydale Avenue and Bayshore Boulevard	6.5	2.9	6.2	2.7	6.1	2.6	6.0	2.5
56. Evans Avenue and Cesar Chavez Street	7.4	3.5	6.8	3.1	6.6	2.9	6.4	2.8
57. Bryant Street and Cesar Chavez Street	7.9	3.9	7.1	3.3	6.9	3.1	6.5	2.9

[a] *The national 1-hour CO ambient air quality standard is 35.0 ppm, and the state 1-hour CO ambient air quality standard is 20.0 ppm. National and state 8-hour standards are 9.0 parts per million.*

Traffic Information Source: TJKM Transportation Consultants, 2010.

Source: Christopher A. Joseph & Associates, March 2010. Calculation data and results are provided in Appendix E.

As shown in Table V.H-2, existing CO concentration levels at the study intersections currently do not exceed the national and state 1-hour and 8-hour CO standards. Therefore, CO hotspots do not currently exist near these intersections.

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[21] The TIS is included as Appendix F.

Existing Regional Air Quality

Measurements of ambient concentrations of the criteria pollutants are used by the United States Environmental Protection Agency (EPA) and the ARB to assess and classify the air quality of each air basin, county, or, in some cases, a specific developed area. The classification is determined by comparing actual monitoring data with federal and state standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "nonattainment" area. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified." The attainment status for the Bay Area Air Basin with regard to the state and federal standards is shown in Table V.H-3.

Table V.H-3
Attainment Status for the Bay Area Air Basin

Pollutant	**Attainment Status**	
	California	**Federal**
Ozone	Non-attainment	Non-attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM_{10}	Non-attainment	Unclassified
$PM_{2.5}$	Non-attainment	Non-attainment
Lead	Attainment	Attainment

Source: Bay Area Air Quality Management District: Ambient Air Quality Standards & Bay Area Attainment Status table, website: http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed March 2010.

Air quality in the basin is monitored by the BAAQMD, which operates a regional network of air pollution monitoring stations to determine if the federal and state standards for criteria air pollutants and emission limits of toxic air contaminants are being achieved. The Bay Area Air Basin is considered "nonattainment" for ozone and $PM_{2.5}$ federal standards, and is considered "nonattainment" for state standards for ozone, PM_{10}, and $PM_{2.5}$. It is unclassified for the federal standard for PM_{10}, and in "attainment" for both the federal and state ambient air quality standards for SO_2, Pb, and NO_2, which is a pure form of NO_X.

The average daily emissions inventory for the entire Bay Area and San Francisco County is summarized in Table V.H-4. In the Bay Area, motor vehicles generate the majority of ROG, NO_X, and CO emissions; stationary sources generate the most SO_X; and area-wide sources generate the most airborne particulates. San Francisco follows the same trends as the Bay Area with the exception of SO_x where the majority is from motor vehicles instead of stationary sources.

Table V.H-4
2010 Estimated Average Daily Regional Emissions

Emissions Source	Emissions in Tons Per Day					
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Bay Area						
Stationary (Point) Sources	10.71	45.2	51.3	47.1	16.6	12.4
Area-Wide Sources	89.1	163.2	17.2	0.6	179.3	53.6
Mobile Sources	163.1	1,387.4	345.6	14.4	19.8	15.7
Natural (non-anthropogenic) Sources	106.5	49.4	1.6	0.5	5.1	4.3
Total Emissions	465.7	1,645.1	415.8	62.7	220.8	85.9
San Francisco County						
Stationary (Point) Sources	6.4	1.8	2.7	0.1	0.7	0.5
Area-Wide Sources	9.1	4.1	2.0	0.1	11.6	2.9
Mobile Sources	16.4	129.9	72.1	15.8	4.6	4.2
Natural (non-anthropogenic) Sources	1.0	-	-	-	-	-
Total Emissions	32.8	135.8	76.8	16.0	16.9	7.6

"-" represents data not available.
Source: California Air Resources Board, website: http://www.arb.ca.gov/app/emsinv/emssumcat.php, January 2009.

Existing Local Air Quality

The BAAQMD monitors ambient air pollutant concentrations through a series of monitoring stations located throughout the Bay Area including the San Francisco Arkansas Street Monitoring Station located in the City of San Francisco. Table V.H-5 identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the Arkansas Street-San Francisco monitoring station through the period of 2006 to 2008. Monitoring was not conducted at this station for the SO_2 maximum 1-hour concentration; therefore, no site-specific data is available for those emission levels.

Monitoring station measurements indicate that air quality in San Francisco performs well against state standards for criteria air pollutants. Ambient PM_{10} concentrations have violated the state standard and ambient $PM_{2.5}$ concentrations have violated the federal standard on occasion at the Arkansas Street station. Particulate matter in the atmosphere is the result of many dust- and fume-producing industrial and agricultural operations, construction, fugitive sources (such as roadway dust), and atmospheric photochemical reactions involving ROGs and NO_X. For carbon monoxide, a product of incomplete combustion, the air in San Francisco meets state and federal standards; however, concentrations in the vicinity of congested intersections and highway segments could potentially be higher than the monitoring data indicates.

Table V.H-5
Ambient Pollutant Concentrations Registered at the San Francisco – Arkansas Street Station

Pollutant	Standards[1, 2]	Year		
		2006	2007	2008
Ozone – 1-hour				
Maximum concentration monitored (ppm)		0.053	0.060	0.082
Number of days exceeding state standard	>0.09 ppm	0	0	0
Ozone – 8-hour				
Maximum concentration monitored (ppm)		0.046	0.049	0.066
Number of days exceeding federal standard	>0.075 ppm	0	0	0
Number of days exceeding state standard	>0.070 ppm	0	0	0
Carbon Monoxide – 1-hour				
Maximum concentration monitored (ppm)		2.7	2.5	5.7
Number of samples exceeding federal standard	>35 ppm	0	0	0
Number of days exceeding state standard	>20 ppm	0	0	0
Carbon Monoxide – 8-hour				
Maximum concentration monitored (ppm)		2.1	1.60	2.3
Number of samples exceeding federal standard	>9 ppm	0	0	0
Number of days exceeding state standard	>9.0 ppm	0	0	0
Nitrogen Dioxide – 1-hour				
Maximum concentration monitored (ppm)		0.107	0.069	0.062
Number of samples exceeding state standard	>0.18 ppm	0	0	0
Suspended Particulate Matter (PM_{10}) – 24-hour				
Maximum concentration monitored ($\mu g/m^3$)		61.0	70	41
Number of samples exceeding federal standard	>150 $\mu g/m^3$	0	0	0
Number of samples exceeding state standard	>50 $\mu g/m^3$	3	2	0
Suspended Particulate Matter ($PM_{2.5}$) – 24-hour				
Maximum concentration monitored ($\mu g/m^3$)		54.3	45.2	29.4
Number of samples exceeding federal standard	>35 $\mu g/m^3$	3	5	0

Source: Bay Area Air Quality Management District, http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx, March 2010.

[1] Parts by volume per million of air (ppm) or micrograms per cubic meter of air ($\mu g/m^3$).

[2] Federal and state standards are for the same time period as the maximum concentration measurement unless otherwise indicted.

In 2005 and 2006, air quality monitoring associated with the San Francisco Electric Reliability Project[22] was conducted to compare the BAAQMD air quality monitoring data. Several community stations were located in the Potrero Hill and Bayview Hunters Point neighborhoods. This study involved measuring annual average concentrations of PM_{10} and $PM_{2.5}$ at five locations including Arkansas Street, the Southeast Community Center, the Muni Maintenance Yard, Potrero Recreation Center, and Malcolm X Academy. The measured annual average PM_{10} concentrations at these five locations ranged from 16.9 to 20 $\mu g/m^3$, with the minimum and maximum measurements reported at the Potrero Recreation Center and Muni Maintenance Yard, respectively. The measured annual average $PM_{2.5}$ concentrations ranged from 7.6 to 9.3 $\mu g/m^3$, with the minimum and maximum measurements reported at the Potrero Recreation Center and Southeast Community Center, respectively.

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[22] Rajiv Bhatia and Thomas Rivard. 2008. Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review.

REGULATORY SETTING

Federal

Federal Ambient Air Quality Standards

The EPA is responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

State

State Ambient Air Quality Standards

Although the federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological problems in California, there is considerable diversity between the state and national ambient air quality standards, as shown in Table V.H-1. California ambient standards tend to be at least as protective as national ambient standards and are often more stringent.

California Air Resources Board

The ARB is the state agency responsible for regulating air quality. The ARB's responsibilities include establishing state ambient air quality standards, emissions standards, and regulations for mobile emissions sources (e.g., autos, trucks, etc.), as well as overseeing the efforts of countywide and multi-county air pollution control districts, which have primary responsibility over stationary sources.

Regional

Bay Area Air Quality Management District

The BAAQMD is the regional agency responsible for air quality regulation within the Bay Area Air Basin. The BAAQMD regulates air quality through its planning and review activities. The district has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits; it can also impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The BAAQMD regulates new or expanding stationary sources of toxic air contaminants.

In January 2006, the BAAQMD, in cooperation with the Bay Area Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), adopted the *Bay Area 2005*

Ozone Strategy. The Ozone Strategy is a roadmap showing how the San Francisco Bay Area will achieve compliance with the state 1- hour ozone standard as expeditiously as practicable, and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others. The *2005 Ozone Strategy* also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard. In this, the *2005 Ozone Strategy* replaces the *2000 Clean Air Plan.*. Like the *2000 Clean Air Plan* and prior versions thereof, the *2005 Ozone Strategy* continues to implement and expand key mobile-source emissions control, including 19 transportation control measures. Although an ozone-control plan, the *2005 Ozone Strategy* also includes information concerning particulate matter.

Odors

BAAQMD Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. The limitations of this regulation limit the "discharge of any odorous substance which causes the ambient air at or beyond the property line…to be odorous and to remain odorous after dilution with four parts of odor-free air." The BAAQMD must receive odor complaints from ten or more complainants within a 90-day period in order for the limitations of this regulation to go into effect. If this criterion has been met, an odor violation can be issued by the BAAQMD if a test panel of people can detect an odor in samples collected periodically from the source.

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to air quality are discussed in Section V.A (Plans and Policies) of this Draft EIR. General Plan objectives and policies discussed in this Section are as follows:

Air Quality Element

Policy 3.1: Take advantage of the high density development in San Francisco to improve the transit infrastructure and also encourage high density and compact development where an extensive transportation infrastructure exists.

Policy 3.2: Encourage mixed land use development near transit lines and provide retail and other types of service oriented uses within walking distance to minimize automobile dependent development.

Policy 3.4: Continue past efforts and existing policies to promote new residential development in and close to the downtown area and other centers of employment, to reduce the number of auto commute trips to the city and to improve the housing/job balance within the city.

Policy 3.7: Exercise air quality modeling in building design for sensitive land uses such as residential developments that are located near the sources of pollution such as freeways and industries.

Policy 3.8: Promote the development of non-polluting industries and insist on compliance with established industrial emission control regulations by existing industries.

Policy 3.9: Encourage and require planting of trees in conjunction with new development to enhance pedestrian environment and select species of trees that optimize achievement of air quality goals.

Policy 3:10: Continue and expand existing efforts to monitor odors that are a public nuisance and are generated by fast food outlets, restaurants, coffee roasteries and other food production establishments.

Policy 4.3: Minimize exposure of San Francisco's population, especially children and the elderly, to air pollutants.

Transportation Element

Policy 38.1: Improve the existing regional network of truck routes by making designed routes in San Francisco convenient for non-local freight trips with the aim of making the routes direct and connected to other routes.

Policy 38.2: Reduce truck trips through San Francisco that have origins and destinations outside the City and the peninsula by promoting viable alternate truck routes and access across bay bridges that are not as subject to traffic congestion as the Bay Bridge and the Golden Gate Bridge.

Policy 39.1: Establish and maintain advisory truck routes, with clear signage, between industrial areas and freeway interchanges to enhance truck access and to clearly and visibly attract truck traffic away from residential neighborhoods.

Policy 39.2 Accommodate heavy vehicles with extra-legal loads on major truck routes by ensuring vertical clearances, appropriate intersection design for maneuvering and providing signal timing to allow smooth truck progression.

Policy 39.3: Implement measures to reduce adverse affects from trucks/service vehicles and rail traffic by enforcing restrictions on certain routes, specific areas or times of day.

San Francisco Green Building Ordinance

In 2008, the City adopted Chapter 13C (Green Building Requirements) into San Francisco Building Code. The purpose of the requirements is to promote the health, safety, and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the City's buildings and by providing a healthy indoor environment. The ordinance includes the requirement that installation of any solar photovoltaic energy system must meet all installation criteria of the California Energy Commission's Guidebook "Eligibility Criteria and Conditions for Incentives for Solar Energy Systems." The Guidebook establishes criteria that require building projects applying for ratepayer-funded incentives for photovoltaic systems meet minimum energy efficiency levels and recommends that photovoltaic system components and installations meet rating standards and specific performance requirements. As a clean renewable energy source, solar energy provides an alternative to fossil fuels.

The ordinance also requires compliance with the applicable LEED® performance standards for New Construction, Version 2.2. Projects proposing new large commercial interiors and major alterations to existing buildings require that permit applicants submit documentation to verify the use of low-emitting materials under LEED® Environmental Quality Credits EQ4.1, 4.2, and 4.3. LEED® EQ4.1, 4.2, and 4.3 are measures intended to maintain and enhance indoor air quality in buildings. EQ4.1 reduces the quantity of indoor air contaminants through compliance measures directed at limiting VOC quantities used in adhesives and sealants. EQ4.2 similarly reduces the quantity of indoor air contaminants by placing VOC content limits on paints and coatings used on the interior of buildings. EQ4.3 requires that all carpet and carpet cushion installed in a building shall meet the requirements of the Carpet and Rug Institute Green Label program, which has associated VOC emission criteria. In addition, EQ4.3 places additional VOC content limits on carpet adhesives to EQ4.1.

San Francisco Health Code Article 38

San Francisco adopted Article 38 of the San Francisco Health Code, approved November 25, 2008, requiring that new residential projects of 10 or more units located in proximity to high-traffic roadways, as mapped by SFDPH, an Air Quality Assessment be prepared to determine whether residents would be exposed to potentially unhealthful levels of TRPs. SFDPH has issued guidance for the identification and assessment of potential air quality hazards and methods for assessing the associated health risks.[23] Consistent with ARB guidance, SFDPH has identified that a potential public health hazard for sensitive land uses exists when such uses are located within a 150-meter (approximately 500-foot) radius of any boundary of a project site that experiences 100,000 vehicles per day. For assessment purposes, vehicle emissions of $PM_{2.5}$ are used as a surrogate measure for traffic related pollutants. Through air quality modeling, an assessment is conducted to determine if the annual average concentration of $PM_{2.5}$ from the roadway sources would exceed a concentration of 0.2 micrograms per cubic meter (annual average).[24] If this standard is exceeded, the project sponsor must either relocate the building on the parcel or submit a ventilation proposal which could include relocation of the residential ventilation supply or the installation of a filtered air supply system, with high-efficiency filters, designed to remove at least 80 percent of ambient $PM_{2.5}$ from habitable areas of residential units.

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[23] San Francisco Department of Public Health, Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, May 6, 2008, http://dphwww.sfdph.org/phes/publications/Mitigating_Roadway_AQLU_Conflicts.pdf, accessed September 8, 2009.

Construction Dust Control

San Francisco Health Code Article 22B, the San Francisco Construction Dust Control Ordinance (Dust Control Ordinance) was adopted in July 2008, and requires that all site preparation work, demolition, and other construction activities within the City and County of San Francisco comply with specific dust control measures. For projects over 0.5-acre, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the SFDPH prior to issuance of a building permit by the Department of Building Inspection (DBI).

The Dust Control Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the Director of the SFDPH. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code.

Project sites that are over 0.5 acre and are located within 1,000 feet of sensitive receptors are required to develop a site-specific dust control plan to be approved by the director of the SFDPH. The site-specific dust control plan for the proposed project shall require the project sponsor to:

- Submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site;
- Wet down areas of soil at least three times per day;
- Provide an analysis of wind direction and install upwind and downwind particulate dust monitors;

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[24] According to SFDPH, this action level of 0.2 micrograms per cubic meter represents about 8 – 10 percent of the range of ambient $PM_{2.5}$ concentrations in San Francisco based on monitoring data, and is based on epidemiological research that indicates that such a concentration can result in an approximately 0.28 percent increase in non-injury mortality, or an increased mortality at a rate of approximately 20 "excess deaths" per year per one million population in San Francisco. "Excess deaths" (also referred to as premature mortality) refer to deaths that occur sooner than otherwise expected, absent the specific condition under evaluation; in this case, exposure to $PM_{2.5}$. (San Francisco Department of Public Health, Occupational and Environmental Health Section, Program on Health, Equity, and Sustainability, "Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, May 6, 2008. Twenty excess deaths per million based on San Francisco's non-injury, non-homicide, non-suicide mortality rate of approximately 714 per 100,000. Although San Francisco's population is less than one million, the presentation of excess deaths is commonly given as a rate per million population.)

- Record particulate monitoring results;
- Hire an independent, third party to conduct inspections and keep a record of those inspections;
- Establish shut-down conditions based on wind, soil migration, and other factors;
- Establish a hotline for surrounding community members who may be potentially affected by project-related dust;
- Limit the area subject to construction activities at any one time;
- Install dust curtains and windbreaks on the property lines, as necessary;
- Limit the amount of soil in hauling trucks to the size of the truck bed and secure with a tarpaulin;
- Enforce a 15 mile-per-hour (mph) speed limit for vehicles entering and exiting construction areas;
- Sweep affected streets with water sweepers at the end of the day;
- Install and utilize wheel washers to clean truck tires;
- Terminate construction activities when winds exceed 25 mph;
- Apply soil stabilizers to inactive areas; and,
- Sweep off adjacent streets to reduce particulate emissions.

Project sponsors are required to designate an individual to monitor compliance with dust control requirements.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality

standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

CEQA Guidelines Section 15064.7(c) state the following:

> "When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such threshold is supported by substantial evidence."[25]

The currently applicable *BAAQMD CEQA Guidelines 1999* include adopted thresholds of significance for air pollutant emissions. These thresholds are used in the impact analyses below as a basis for determining whether the proposed 2004 and 2009 Housing Elements would result in significant air quality impacts. The BAAQMD recently adopted revised Thresholds of Significance on June 2, 2010.[26] However, according to the BAAQMD, the recently adopted thresholds of significance for criteria air pollutants, health risks from new sources, and greenhouse gases (GHGs), are intended to apply to environmental analyses that have begun on or after adoption of the revised CEQA thresholds. Thresholds pertaining to the health risk impacts of sources upon sensitive receptors are intended to apply to environmental analyses begun on or after January 1, 2011. Therefore, the proposed project would be subject to the thresholds identified in BAAQMD's *1999 CEQA Guidelines*. However, in anticipation of BAAQMD adopting revised thresholds of significance, an analysis of the proposed project's impact with respect to the recently adopted CEQA significance thresholds was performed (GHGs are addressed in Section V.I Greenhouse Gas Emissions).

The currently applicable version of *BAAQMD CEQA Guidelines* was released in December 1999 and serves as an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. The proposed Housing Elements are an update to the City's General Plan, and as such, are referred to as plan-level documents, as opposed to specific development projects. For planning level documents, the BAAQMD recommends that the evaluation of a plan's air quality impacts focus on the analysis of the plan's consistency with the most recently adopted regional air quality plan. Therefore, significance will be based on the consistency of the proposed project with the *Bay Area 2005 Ozone Strategy*, which is the most recently adopted regional air quality plan. For the potential for odors and the protection of sensitive receptors from localized concentrations of certain pollutants that pose a potential health risk, the BAAQMD recommends the establishment of buffer zones around existing and proposed emission sources. Buffer zones would be reflected in local plan policies, land use maps, and implementing ordinances. Individual development projects undertaken in the future within the City would be subject to a significance determination based on the BAAQMD's quantitative thresholds for individual projects.

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[25] California Environmental Quality Act, CEQA Guidelines, Section 15064.7(c). 2010.

[26] Bay Area Air Quality Management District, Resolution No. 2010-06, A Resolution of the Board of Directors of the Bay Area Air Quality Management District Adopting Thresholds for Use in Determining Significance of Projects' Environmental Effects Under the California Environmental Quality Act.

Impact Evaluation

Impact AQ-1: The proposed Housing Elements would not conflict with the applicable air quality plan. (Less than Significant)

2004 Housing Element and 2009 Housing Element Analysis

Consistency of the proposed Housing Elements with regional air quality plans can be determined by comparing the growth factors used for the Housing Element EIR with those used in the most recently adopted regional air quality plan, the *Bay Area 2005 Ozone Strategy*. The *2005 Ozone Strategy* growth assumptions for Bay Area communities are based on ABAG's Projections. The growth projections for the Housing Element EIRs are based on the regional population and employment projections provided by ABAG. As both the Housing Elements and the *2005 Ozone Strategy* utilize ABAG projections, the Housing Elements would not result in a significant impact on regional air quality planning efforts.

BAAQMD's also recommends a significance evaluation compare whether the increase in vehicle miles traveled (VMT) would increase at a rate equal to or lower than the rate of population growth assumed in the regional air quality plan. The ABAG Projections forecasts, on which the *2005 Ozone Strategy* is based, forecast citywide population growth of more than 10.6 percent between 2009 and 2025, the horizon year for the cumulative analysis of the Housing Element EIR. Based on Citywide projections, the VMT is anticipated to increase by 8.4 percent during the same timeframe.[27] Thus VMT would increase at a lower rate than the rate of population growth assumed in the *2005 Ozone Strategy*. Additionally, incremental VMT increases resulting from projected growth and development within the City would be less than could result if the same amount of growth occurred in outlying areas of the air basin (where trip lengths would be longer, on average). Residential growth in urban areas and near transit corridors would enable the use of transit and alternative transportation modes more effectively than suburban surroundings. It is also expected that as traffic congestion problems worsen in the region and travel times get longer, people will choose to shorten their commute distance or take public transportation alternatives. Furthermore, the proposed Housing Elements do not propose new development, but rather provide direction for how new development in the City should occur. Therefore the Housing Elements would not result in a significant impact with respect to VMT.

Additionally, the BAAQMD CEQA Guidelines recommend that consistency of a plan be evaluated based on the extent to which it implements Transportation Control Measures (TCMs) outlined in the Bay Area *2005 Ozone Strategy*. The Housing Elements contain policies that will promote higher residential density and reduction in a per capita VMT, which would be consistent with TCMs outlined in the *Bay Area 2005 Ozone Strategy*; these TCMs are also incorporated into the Transportation Element of the General Plan.

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[27] Email correspondence between Elizabeth Sall, SFMTA and Gregory Reissen, March 26, 2010.

Therefore, regarding consistency with the applicable air quality plan, the proposed Housing Elements would result in a ***less than significant*** impact.

Impact AQ-2: The proposed Housing Elements would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. (Less than Significant)

Construction

The subject of this EIR is the proposed revision of the Housing Element of the San Francisco General Plan. The 2004 Housing Element and 2009 Housing Element are updates to the 1990 Residence Element of the San Francisco General Plan. The Housing Elements are public policy documents that comprehensively address issues of housing needs for San Francisco residents and households. As discussed in Section IV (Project Description), this Draft EIR will analyze the potential environmental effects that could occur in the City of San Francisco as a result of implementing the 2004 Housing Element and 2009 Housing Element.

2004 Housing Element Analysis

The following 2004 Housing Element policies could contribute incrementally to an existing or projected air quality violation by promoting increased density and directing residential development to certain areas of the City, thereby consolidating construction-related emissions from residential development to those areas and potentially contributing to localized air quality impacts

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. The City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 2004 Housing Element also encourages new housing through on-going and future community planning processes (Policies 1.1, 11.6 and Implementation Measures 1.3.1, 1.3.2, 1.6.2, and 2.4.2) and on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4). Promoting new development in certain areas of the City (e.g., Downtown) could result in a greater proportion of housing, and subsequent construction emissions to those areas of the City, resulting in increases in localized construction emissions.

The 2004 Housing Element also promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density could result in longer construction durations by promoting buildings that contain a greater number of units, which could result in an increase in construction-related emissions for an individual project.

The following 2004 Housing Element policies could reduce the 2004 Housing Element's effects related to violating air quality standards by discouraging housing demolition and encouraging maintenance of existing housing units.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	3.1: Discourage the demolition of sound existing housing.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	5.5: Preserve landmark historic residential buildings.
	IM 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	

As shown above, the 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing housing (including Policies 2.1, 3.3, and 3.6 and Implementation Measure 3.6.6) to a degree similar to the 1990 Residence Element. Preservation of existing housing units would help maintain the City's housing stock, reducing the need to provide new housing units to meet projected housing needs. Any reduction in the need for new housing could reduce construction-related air quality impacts. Essentially both the 1990 Residence Element and 2004 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensure that there is adequate land available to meet future housing needs. The 2004 Housing Element includes policies that encourage increased density, potentially increasing the duration of construction activities. Any such incremental increases in construction duration from marginal increases in allowable density would be negligible. The 2004 Housing Element also includes policies that promote residential uses in certain areas of the City more so than the 1990 Residence Element. Directing residential development to certain areas of the City would result in localized construction-related air quality impacts.

According to BAAQMD, PM_{10} is the pollutant of greatest concern with respect to construction-related emissions. Although heavy-duty equipment, material transport, and employee commutes result in emissions of criteria air pollutants (e.g., CO) and ozone precursors (e.g., ROG and NOx), these emissions are included in the regional emissions inventory, which serves as the basis for the air quality plans, and are not expected to impede attainment of the ozone standard or maintenance of the CO standard in the SFBAAB.[28] Consequently, BAAQMD has not identified currently applicable mass emissions thresholds for construction-related emissions of ROG, NOx, or CO, and bases its determination of significance on implementation of fugitive PM_{10} dust control measures.[29] The BAAQMD's approach to CEQA analyses of construction-related fugitive PM_{10} dust emissions is to require implementation of effective and comprehensive control measures rather than a detailed quantification of construction emissions. Although the proposed 2004 Housing Element would not directly result in new construction, as discussed above, new construction would be required to comply with previously discussed regulations including compliance with Article 22B, the Construction Dust Ordinance. The Construction Dust Ordinance incorporates BAAQMD's 1999 dust control measures and would require construction projects within 1,000 feet of sensitive receptors to prepare a site-specific dust control plan. That plan must include a number of equivalent measures to minimize visible dust. Therefore, any construction-related impacts of new construction would be adequately addressed by compliance with Article 22B, and the 2004 Housing Element would have a ***less than significant*** impact with respect to violating an air quality standard or contributing substantially to an existing or projected air quality violation.

2009 Housing Element Analysis

The following 2009 Housing Element policies could contribute incrementally to an existing or projected air quality violation by directing residential development to certain areas of the City and promoting increased density, thereby consolidating construction-related emissions from residential development within those areas and potentially contributing to localized air quality impacts.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.

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[28] Bay Area Air Quality Management District, BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans. December 1999. Available on the Internet at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/1999-CEQA-Guidelines.aspx. Accessed June 15, 2010.

[29] Ibid, pp. 13–15.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1 Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79: Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure (Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80). Promoting new development in certain areas of the City (e.g., Downtown) could result in a greater proportion of housing, and subsequent construction emissions to those areas of the City, resulting in increases in localized construction emissions.

Furthermore, the 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). While the 2009 Housing Element contains a policy that advocates for family-sized housing units (Policy 4.1 and Implementation Measure 32), overall density increases from such policy would be speculative as less units would be accommodated within a given building envelope. Increased density could result in longer construction durations by promoting buildings that contain a greater number of units, which could result in an increase in emissions for an individual construction project.

The following 2009 Housing Element policies could reduce the 2009 Housing Element's effects related to an existing or projected air quality violation by discouraging housing demolition, and encouraging maintenance activities of existing housing units.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.3: Prevent the removal or reduction of housing for parking.	
	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.

	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.4, 3.1, 3.4, and 9.3) to a degree similar to the 1990 Residence Element. The maintenance and preservation of existing housing would help to preserve the existing housing stock, requiring less new development to meet housing goals, resulting in fewer construction-related air quality impacts. 2009 Housing Element Policies 2.1, 3.1, 3.4, and 9.3 are essentially the same as their corresponding 1990 Residence Element Policies. 2009 Housing Element Policy 13.4 expands upon 1990 Residence Element Policy 7.5 by promoting the preservation of existing buildings. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensure that there is adequate land available to meet future housing needs. As discussed previously, new construction would be required to comply with previously discussed regulations, including compliance with Article 22B, the Construction Dust Ordinance. Any potential impacts from new construction related to air quality violations would be reduced with compliance with Article 22B, and therefore any construction-related impacts of new construction would be adequately addressed by compliance with Article 22B. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to violating an air quality standard or contributing substantially to an existing or projected air quality violation.

Operation

The potential air pollutant emissions (specifically criteria air pollutants) from future residential development were evaluated quantitatively using the URBEMIS2007 computer model distributed for use by the ARB and recommended for use by the BAAQMD. Table V.H-6 presents the operational emissions associated with the projected population increase between 2009 and 2025.[30] As described in Section V.D (Population and Housing), to accommodate projected population growth, approximately 41,651 new units will be required. It was assumed that approximately 1.7 percent of these housing units would be single-family units while the others would be multi-family units.[31] Emissions evaluated in this EIR include the air pollutant emissions from the potential increase in traffic as well as area source emissions. Vehicle exhaust emissions associated with increased traffic is based on analysis year (2025), seasonal temperatures, trip characteristics, and the percentage of travel on paved versus unpaved roads. Default traffic values provided in the URBEMIS2007 model for San Francisco County were used in this analysis. Evaluated area source emissions include the following:

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[30] Development projections provided by John Rahaim, Director of City Planning, to Michael Carlin, Deputy General Manager at the San Francisco Public Utilities Commissions, July 9, 2009.

[31] This assumption is based on the current ratios of single-family homes and multi-family homes as compared to land available to accommodate new single-family and multi-family homes (housing capacity).

Natural Gas Combustion

URBEMIS2007 was used to estimate fuel combustion emissions associated with water and space heating. Emissions estimates for space and water heating assumes natural gas is used as the primary source of fuel.

Landscape maintenance

Landscape maintenance equipment generates emissions from fuel combustion and from evaporation of unburned fuel. Equipment in the landscape category includes lawn mowers, roto tillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. Landscape maintenance emissions are assumed to occur only during the summer (i.e., non-winter) days.

Consumer products

Consumer production emissions are generated by a wide range of products including air fresheners, household cleaners, and personal care products.

Architectural coatings

URBEMIS2007 estimates emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. This evaluation assumes 10 percent of residences are repainted each year.

Table V.H-6
Air Pollutant Emissions from
Projected 2025 Residential Development (lbs/day)

Operational Activity	ROG	NOx	PM_{10}
2025 Summer Emissions			
Area Source Emissions			
Natural Gas	25	318	0.61
Landscape	6	0.38	0.09
Consumer Products	2,038	--	--
Architectural Coatings	285	--	--
Area Source Subtotal	*2,353*	*318*	*0.70*
Vehicle Emissions	1,079	969	4,234
Total Emissions	***3,432***	***1,287***	***4,235***

Table V.H-6
Air Pollutant Emissions from
Projected 2025 Residential Development (lbs/day)

Operational Activity	ROG	NOx	PM_{10}
2025 Winter Emissions			
Area Source Emissions			
Natural Gas	25	318	0.61
Landscape - No Winter Emissions	--	--	--
Consumer Products	2,038	--	--
Architectural Coatings	285	--	--
Area Source Subtotal	*2,347*	*318*	*0.61*
Vehicle Emissions	1,018	1,405	4,234
Total Emissions	***3,366***	***1,723***	***4,235***

Note: Numbers have been rounded to the nearest whole number where applicable.

Source: URBEMIS and Christopher A. Joseph & Associates, 2010. Calculation data can be found in Appendix E.

The policies from the 2004 Housing Element and the 2009 Housing Element that could result in impacts with respect to violating air quality standards are discussed below. It should be noted that the 2004 and 2009 Housing Elements would not propose new development and would therefore not directly result in air pollutant emissions. New development could affect such issues, but would be evaluated on a project-by-project basis.

2004 Housing Element Analysis

As discussed previously under Impact AQ-2, the 2004 Housing Element promotes housing in commercial and industrial areas, neighborhood commercial districts, housing near the Downtown and along transit corridors to a greater extent than the 1990 Residence Element. The 2004 Housing Element policies that direct growth to certain areas of the City (Downtown, commercial, neighborhood commercial districts, etc.) would promote residential uses in proximity to jobs, neighborhood services and transit. Increased density and policies directing growth to job cores, neighborhood services, and transit (as discussed in Section V.F [Transportation and Circulation] and Section V.I. [Greenhouse Gas Emissions]) could reduce the growth of the City's overall vehicle trips and associated vehicle emissions, relative to regional growth.

The following additional 2004 Housing Element policies could reduce the growth of emissions of projected 2025 housing units by encouraging housing in locations supportive of alternative transportation (near accessible amenities and transit), promoting neighborhood-serving commercial amenities, which could reduce vehicle emissions, and by encouraging energy efficient housing development, which could reduce vehicle and stationary source emissions associated with residential development.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Encourage housing to be located in areas with existing amenities or access to transit.	Policy 11.2: Ensure housing is provided with adequate public improvements, services, and amenities.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
Promote neighborhood-serving commercial amenities in residential areas.	Policy 11.3: Encourage appropriate neighborhood-serving commercial activities in residential areas, without causing affordable housing displacement.	Policy 12.2: Allow appropriate neighborhood-serving commercial activities in residential areas.
	Implementation Measure 11.1.1: The new Land Use Element will identify in-fill sites appropriate for mixed-use residential projects. Appropriate neighborhood serving retail, public facilities and supportive amenities should be encouraged.	
Promote energy efficient housing development.	Policy 11.10: Include energy efficient features in new residential development and encourage weatherization in existing housing to reduce overall housing costs and the long-range cost of maintenance.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing cost.

As shown above, the 2004 Housing Element promotes housing in areas with existing amenities (Policy 11.2), housing in areas with neighborhood-serving commercial amenities (Policy 11.3 and Implementation Measure 11.1.1), and housing with energy efficient features (Policy 11.10). As discussed in detail in Section V.I (Greenhouse Gas Emissions), the increased density of residential uses, as well as locating neighborhood-serving commercial uses in residential areas, would help to reduce the reliance on vehicles and could result in an overall reduction in vehicle emissions within the City. The inclusion of energy efficient features and weatherization would reduce energy required to support heating, cooling, and water/wastewater conveyance. This reduction in the need for energy would result in a corresponding reduction in the generation of associated air quality impacts that result from energy production processes.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensure that there is adequate land available to meet future housing needs. The 2004 Housing Element seeks to accommodate new housing by including policies that encourage increased density in proximity to job cores, local-serving transit and neighborhood services. Combined, the effect of vehicle emissions associated with new housing in well-served areas of the City would be less than if new housing is not developed in proximity to transit, services, and jobs.

Additionally, the Air Quality Element of the General Plan includes policies to take advantage of the high density development in San Francisco to improve transit infrastructure (Policy 3.1), to encourage high density and compact development near extensive transportation infrastructure (Policy 3.1), to encourage mixed land use development near transit lines (Policy 3.2), to provide retail and service oriented uses within walking distance, and to promote new residential development close to Downtown and centers of employment (Policy 3.4). While residential development would occur regardless of the policies promoted in the Housing Element, potential impacts to air quality could be reduced with "smart" growth that would achieve the goal of providing increased housing but in locations well served by amenities, near transit and job cores, thereby reducing vehicular emissions. Additionally, the 2004 Housing Element includes policies advocating for energy efficiency, which combined with compliance with the SFGBO, would reduce operational emissions associated with residential uses. The SFGBO contains provisions for the use of solar energy as well as provisions for the use of low-emitting materials on building interiors, provisions that emphasize the use of clean energy and improved air quality. The implementation of the SFGBO for residential buildings requires verification that the energy performance for low-rise residential buildings or high-rise residential buildings shows that the proposed building exceeds Title 24 by at least 15 percent.[32] Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to violating an air quality standard or contributing substantially to an existing or projected air quality violation.

2009 Housing Element Analysis

As discussed previously under Impact AQ-2, the 2009 Housing Element promotes housing near transit and other infrastructure, housing in proximity to neighborhood services, and housing within mixed-use areas. As with the 2004 Housing Element, the 2009 Housing Element includes policies that would promote residential uses in proximity to jobs, neighborhood services and transit. Increased density and policies directing growth to mixed-use areas, neighborhood services, and transit (as discussed in Section V.F [Transportation and Circulation] and Section V.I. [Greenhouse Gas Emissions]) could reduce the growth of the City's overall vehicle trips and associated vehicle emissions, relative to the region.

In accordance with Housing Element policies, the Air Quality Element of the General Plan promotes policies that take advantage of the high density development in San Francisco to improve transit infrastructure, to encourage high density and compact development near extensive transportation infrastructure, to encourage mixed land use development near transit lines, to provide retail and service-oriented uses within walking distance, and to promote new residential development close to Downtown and centers of employment. Therefore, in coordination with these policies, the 2009 Housing Element, which promotes housing in proximity to transit, could potentially reduce anticipated growth in vehicle miles traveled, and could thus result in less vehicle emissions than expected from development not targeted near transportation resources.

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[32] City and County of San Francisco, Application for a Locally Adopted Energy Standards by the City and County of San Francisco in Accordance with Section 10-106 of the California Code of Regulations, Title 24, Part 1, July 31, 2008, http://www.energy.ca.gov/title24/2005standards/ordinances/2008-09-26_SAN_FRANCISCO.PDF, accessed March 26, 2010.

The following 2009 Housing Element policies could further reduce the effects of new development on air quality by encouraging energy efficient housing development, which could reduce the growth of vehicle emissions and stationary source emissions associated with residential development.

Impact	2009 Housing element	Corresponding 1990 Residence Element Policy
Energy efficient housing development	Policy 12.3: Ensure new housing is sustainably supported by the City's infrastructure systems.	
	Policy 13.4: Promote the highest feasible level of "green" development in both private and municipally-supported housing.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element promotes energy-efficient development (Policies 12.3 and 13.4) to a greater extent than the 1990 Residence Element. The inclusion of energy efficient features and weatherization would reduce energy required to support heating, cooling, and water/wastewater conveyance. This reduction in the need for energy would result in a corresponding reduction in the generation of associated air quality impacts that result from energy production processes.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts to air quality could be reduced with "smart" growth that would achieve the goal of providing increased housing in locations well served by amenities and in proximity to transit and job cores, thereby reducing the expected growth of vehicular emissions. In addition, the 2009 Housing Element includes policies that advocate for energy efficient development, which when combined with compliance with the SFGBO, would reduce operational emissions associated with residential uses. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to violating an air quality standard or contributing substantially to an existing or projected air quality violation.

Impact AQ-3: The proposed Housing Elements would not expose sensitive receptors to substantial pollutants. (Less than Significant)

2004 Housing Element and 2009 Housing Element Analysis

Potential Exposures to point sources of air pollution

Potential health-relevant exposures to air pollutants to residents and other sensitive receptors may result from a variety of common urban sources. Industrial facilities such as refineries, chemical plants and chrome platers, commercial facilities such as dry cleaners and gasoline stations, are sources of TACs and regulated criteria air pollutants. These sources are typically regulated to prevent adverse health impacts as point sources by the BAAQMD. As discussed previously, the BAAQMD's currently applicable *CEQA Guidelines* (1999) recommends the establishment of a buffer zone around existing and proposed emissions sources when evaluating the impacts of a plan in relation to air toxics (TACs).

The BAAQMD, with permitting authority over stationary sources in the City, is in the process of updating its source inventory database.[33] The current database is highly inaccurate in both emissions inventory and location of point source emissions, therefore, at this time is it not possible to generate a buffer zone around all important stationary source emissions. This analysis therefore conservatively assumes that stationary sources could occur throughout the City. While most industrial activities that generate air toxics would be confined to industrial zones of the City, other uses, such as dry cleaners also emit air toxics and are generally allowed throughout the City. The assumption that point sources could occur throughout the City is therefore, intended as a conservative assumption. As such, residential development could occur in proximity to point sources of air pollutants. The potential for the proposed Housing Elements to expose sensitive receptors to stationary sources of air toxics and TRPs is addressed below.

Potential Exposures to Traffic Related Pollutants (TRPs)

As discussed above, roadway vehiclse emit both criteria air pollutants such as CO, PM, and NOx as well as other non-criteria toxic air contaminants, including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, and diesel exhaust. Human exposures to TRPs follows the distribution of the traffic circulation systems and is generally proportional to vehicle volume. Residences adjacent to freeways, state highways, and many of San Francisco's arterial roadways experience substantial levels of TRPs.

Figure V.H-1, Potential Housing Units: Capacity and Pipeline Units within the Potential Roadway Exposure Zone, shows locations of the City potentially affected by traffic related pollutants. In the map modeled $PM_{2.5}$ is used as a proxy for TRPs from mobile sources. Figure V.H-1 presents the number of housing units available for residential development, as well as the number of housing units within the City's pipeline that could be developed within the Potential Roadway Exposure Zone. As shown, the areas most affected by TRPs are located in close proximity to I-280, US 101, and I-80, as well as the following planning districts and plan areas: Downtown, Japantown, West SoMa, East SoMa, Western Addition, Market/Octavia, Marina, Northeast, and Transbay. There is citywide capacity for approximately 22,168 housing units within the Potential Roadway Exposure Zone.

Residential development could occur within the Potential Roadway Exposure Zone, potentially exposing residents to existing elevated levels of TRPs including to constituent TACs, $PM_{2.5}$, and NO_2. As discussed throughout this EIR, residential development in the City would occur irrespective of the proposed Housing Elements. Housing Element law was enacted to ensure that localities plan and make land available for new housing. Part I of the 2009 Housing Element, the Data and Needs Analysis, shows that the City has available capacity to meet the RHNA, therefore rezoning to accommodate new housing is not required. The proposed Housing Elements are policy documents that provide direction for accommodating new housing driven by population growth. Policies that encourage increased density in areas of the City that are within the Potential Roadway Exposure Zone, could expose sensitive residential receptors to substantial amounts of roadway traffic related pollutants. As discussed in Impact AQ-1, the 2004 Housing Element encourages increased density in the Downtown, mixed-use districts,[34] and along transit lines. Many of these areas are within the Potential Roadway Exposure Zone. Similarly, the 2009 Housing Element promotes housing near transit and accommodating housing through community planning processes (anticipated to occur in areas of the City also served by transit). Many of the City's major transit corridors are within the Potential Roadway Exposure Zone, therefore both the 2004 and 2009 Housing Elements could promote new residential uses within the Potential Roadway Exposure Zone to a greater degree than the 1990 Residence Element, potentially exposing residential receptors to substantial roadway TRPs. Some constituents of TRPs, including diesel exhaust are expected to fall substantially over time due to ARB engine, fuel, and emissions regulations.

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[33] According to the BAAQMD website, BAAQMD issued a Request for Proposal (RFP) for the development of a detailed TAC and PM emissions inventory for the Bay Area on March 18, 2010. This RFP closed on April 15, 2010. Accessed June 15, 2010.

Increased density could increase some TRPs including, PM $_{2.5}$ NO_2, and TACs on some roadway within San Francisco. However, at the same time, increased density and associated shifts vehicle trips to alternative modes of transportation (transit, bicycling, and walking) could reduce overall expected growth of vehicle trips and VMT, as discussed extensively in Section V.F Transportation and Circulation. Overall, future growth will continue to contribute some additional TRP emissions, albeit less than a Housing Element without policies encouraging increased density and housing that is supportive of alternative modes of transportation.

As discussed previously, the BAAQMD in the applicable *CEQA Guidelines* (1999), recommends the establishment of a buffer zone around existing and proposed emissions sources when evaluating the impacts of a plan in relation to air pollutants. Residential uses typically do not generate point source air toxics, although the associated vehicle trips would contribute to citywide TRP emissions. The Potential Roadway Exposure Zone Map, codified in Article 38 of the Health Code, provides a buffer around significant TRP emission sources using $PM_{2.5}$ as a proxy for TRP exposures.

New development located within the Potential Roadway Exposure Zone, or in proximity to stationary sources could be adversely affected by roadway TRPs including $PM_{2.5}$ NO_2, and TACs. However, policies contained in the Air Quality Element and Transportation Element of the General Plan, as well as rules codified in Article 38 of the Health Code, would reduce the impacts of the 2004 and 2009 Housing Element policies that advocate for housing potentially near sources of air pollution. General Plan Air Quality Element policy 3.7 requires that review of new housing projects consider the location of industrial sites or other sources of air pollution in the design of the residential building and to orient air intakes away from sources of pollution. Policy 3.8 promotes non-polluting industries and insists that industry

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[34] Mixed-use districts include the South of Market areas of East and West SoMa.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

Figure V.H-1 Potential Housing Units: Capacity and Pipeline Units within the Potential Roadway Exposure Zone

▨ Roadway Exposure Zone

Parks

Water

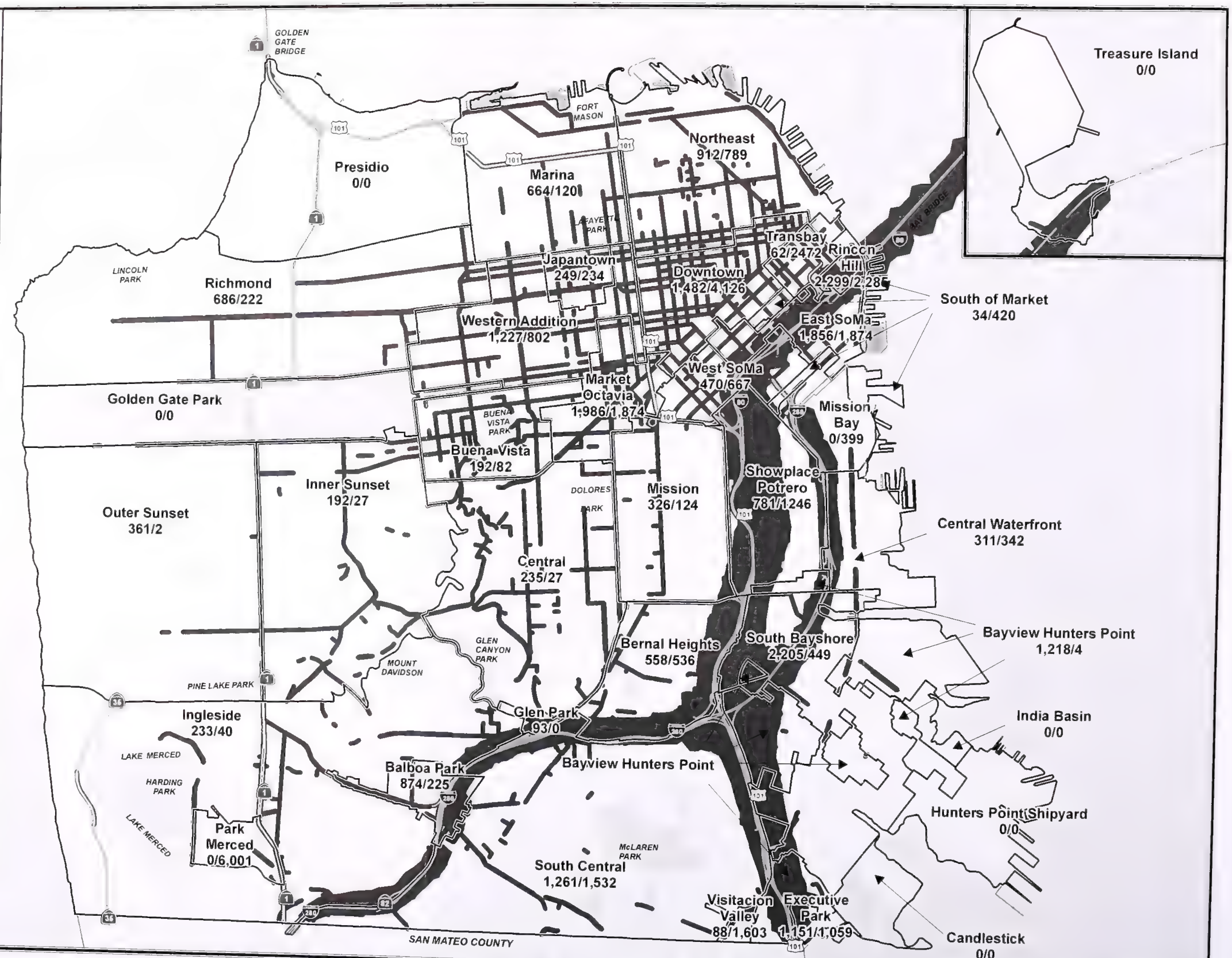
Notes

1 Numerical values represent housing capacity within the potential roadway exposure zone followed by net pipeline units within this zone (Housing Unit Capacity/ Pipeline Units), except as noted below

2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated

3 "Potential Roadway Exposure Zone" refers to those areas within the City and County of San Francisco which, by virtue of their proximity to freeways and major roadways, may exhibit high Particulate Matter (PM) 2 5 concentrations attributable to local roadway traffic sources

0 0.5 1 Mile



Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Potential Roadway Exposure Zone CCSF Department of Public Health 2008

comply with established emissions control regulations. Policy 3.9 requires the planting of trees in conjunction with new development to optimize air quality (also required by Planning Code Section 143). Additionally, Transportation Element policies 38.1 and 38.2 promote the routing of trucks outside of the City, with the aim of reducing traffic congestion and avoiding neighborhood areas. Policies 39.1, 39.2, and 39.3 similarly encourage truck routing through industrial areas and away from residential neighborhoods. Further, Article 38 of the San Francisco Health Code contains requirements for air quality assessment and mitigation when new residential exposures exceed action levels for acceptable TRP concentrations.

Overall, the City's Air Quality and Transportation Element policies in conjunction with compliance with Article 38 of the Health Code, would reduce the impacts of new residences being exposed to substantial pollutants, including mobiles sources (vehicles) and point sources (industry), by reducing exposure of residences to air pollutants and considering the location of new development in relation to existing sources of air pollution. Furthermore, the proposed Housing Elements do not permit any new development. Any new development would be subject to project-level environmental review including an analysis of the project's potential to expose sensitive receptors to air pollutants in accordance with BAAQMD guidance for the analysis of air pollutants and significance thresholds. Finally, the SFDPH will continue to update Article 38, if and when conditions warrant. Thus, the potential for the proposed 2004 and 2009 Housing Elements to expose sensitive residential receptors to substantial pollutants would be ***less than significant***.

Local CO Concentrations

As stated previously, the BAAQMD recommends that CO modeling be performed for projects for which traffic would affect intersections or roadway segments operating at LOS E or F, or would cause a decline to LOS E or F. As discussed throughout this document, the proposed Housing Elements would not generate new vehicle trips beyond those assumed under 2025 Cumulative Conditions. Therefore, this section analyzes future 2025 CO concentrations resulting from residential growth as projected by ABAG. Due to the large number of intersections analyzed as part of the transportation analysis, the ten worst-performing intersections were analyzed to represent the worst case scenarios with respect to CO hotspots under 2025 conditions. CO modeling was performed for the study intersections based on anticipated traffic resulting from 2025 projected housing units and are listed in Table V.H-7.

For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the BAAQMD. This methodology assumes worst-case conditions (i.e., wind direction is parallel to the primary roadway, 90° to the secondary road; wind speed of less than one meter per second; and a high level of atmospheric stability, or lack of change) and provides a screening of maximum, worst-case CO concentrations. Maximum CO concentrations were calculated for peak-hour traffic volumes at the study intersections noted above. Results are presented below in Table V.H-7.

Table V.H-7
Localized Carbon Monoxide Concentrations
From Projected 2025 Residential Development

Intersection	CO Concentrations in Parts per Million [a]							
	Roadway Edge		25 feet		50 feet		100 feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
6. Geary Boulevard & Van Ness Avenue	6.6	2.9	6.3	2.7	6.2	2.6	6.1	2.5
16. 2nd Street and Folsom Street	6.3	2.7	6.1	2.6	6.0	2.5	5.9	2.5
17. 2nd Street and Bryant Street	6.3	2.7	6.1	2.6	6.0	2.5	5.9	2.5
24. 6th Street and Brannan Street	7.2	3.4	6.7	3.0	6.5	2.9	6.3	2.7
31. 16th Street and Potrero Street	6.6	2.9	6.3	2.7	6.2	2.6	6.1	2.5
41. Sloat Boulevard and 19th Avenue	7.3	3.4	6.8	3.1	6.6	2.9	6.3	2.8
42. Winston Drive and 19th Avenue	6.9	3.2	6.5	2.9	6.4	2.8	6.2	2.7
43. Junipero Serra Boulevard and 19th Avenue	7.7	3.7	7.1	3.3	6.8	3.1	6.6	2.9
50. Sunnydale Avenue and Bayshore Boulevard	6.8	3.1	6.4	2.8	6.3	2.7	6.1	2.6
56. Evans Avenue and Cesar Chavez Street	6.8	3.1	6.4	2.8	6.3	2.7	6.1	2.6
57. Bryant Street and Cesar Chavez Street	7.0	3.2	6.5	2.9	6.4	2.8	6.2	2.6

[a] *The national 1-hour CO ambient air quality standard is 35.0 ppm, and the state 1-hour CO ambient air quality standard is 20.0 ppm. National and state 8-hour standards are 9.0 parts per million.*

Traffic Information Source: TJKM Transportation Consultants, 2010.

Source: Christopher A. Joseph & Associates, March 2010. Calculation data and results are provided in Appendix E.

As shown in Table V.H-7, under future 2025 conditions none of the intersections would exceed the CO standards at the ten worst-performing intersections. It can be assumed that if CO levels at the 10 worst-performing intersections do not exceed the CO thresholds, then the remaining 50 intersections analyzed in the traffic study also would not exceed the CO thresholds. Additionally, as discussed under Impact AQ-2, the 2004 Housing Element promotes housing in commercial and industrial areas, neighborhood commercial districts, housing near the Downtown and along transit corridors to a greater extent than the 1990 Residence Element, which could reduce the number of vehicle trips and/or VMT, thus reducing vehicle emissions.

As discussed under Impact AQ-2, the 2009 Housing Element promotes housing near transit and other infrastructure, housing in proximity to neighborhood services, and housing within mixed-use areas. As with the 2004 Housing Element, the 2009 Housing Element includes policies that would promote residential uses in proximity to jobs, neighborhood services and transit to a greater extent than the 1990 Residence Element, which could reduce the number of vehicle trips and/or VMT, thus reducing vehicle emissions. In addition, 2009 Housing Element Implementation Measures 90, 98, 100, and 101, emphasize the coordination of planning for both housing and supporting transit services and providing incentives to residents and employees for utilizing public transit or other alternative modes of transportation, promoting a reduction in vehicle trips.

Although the 2004 Housing Element and 2009 Housing Element would not result in the construction of residential units, they would shape how new residential development should occur and ensure that there is adequate land available to meet future housing needs. Potential impacts related to air quality violations could be reduced with "smart" growth that would achieve the goal of providing increased housing but in locations well served by amenities, near transit and job cores, thereby reducing vehicular emissions. Furthermore, under 2025 Cumulative Conditions, CO standards at the worst-performing intersections are not anticipated to exceed established thresholds. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to exposing sensitive receptors to CO hotspots.

Impact AQ-4: The proposed Housing Elements would not create objectionable odors. (Less than Significant)

2004 Housing Element and 2009 Housing Element Analysis

According to the BAAQMD CEQA Guidelines, the types of projects that commonly result in odor impacts include: wastewater treatment plant, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing, fiberglass manufacturing, auto body shops, rendering plants, and coffee roasters. Residential uses generally do not create objectionable odors. Therefore, the 2004 and 2009 Housing Element policies that promote residential development would not result in objectionable odors. It is possible that new development could occur near sources of odors; however, Air Quality Element policy 3.10 seeks to reduce the effect of odors that are a public nuisance. Furthermore, the proposed 2004 and 2009 Housing Elements would not directly result in new residential units. New construction would be required to undergo a separate environmental review pursuant to CEQA which would address the environmental effects of any new construction with respect its location in proximity to existing sources of odors. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** effect with respect to odors, and no further analysis of this issue is required.

Cumulative Impacts

The geographic context for cumulative air quality impacts is the entire City of San Francisco. According to the *BAAQMD CEQA Guidelines*, any project that would individually have a significant air quality impact would also have a significant cumulative air quality impact. As discussed throughout this Draft EIR, residential growth and housing construction would occur regardless of implementation of the proposed Housing Elements. The proposed Housing Elements merely guide how residential development should occur with an emphasis on affordability. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as subject to policies in the San Francisco General Plan, governing area plans, design guidelines, Planning Code, and other applicable land use regulations that are intended to reduce impacts related to air quality (including Article 38 of the Health Code). The 2004 Housing Element and 2009 Housing Element policies would not directly result in emissions affecting air quality. The Housing Element policies promote increased density, residential uses in proximity to jobs, neighborhood services, and transit, which could reduce vehicle-related emissions. New construction would also be required to comply with Article 22B, the Construction Dust Ordinance, reducing construction-related impacts associated with new development as well as Article 38 of the Health Code, as discussed previously. Therefore, the cumulative air quality impacts from the 2004 Housing Element and 2009 Housing Element policies are considered ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

DISCUSSION OF RECENTLY ADOPTED BAAQMD CEQA GUIDELINES

As discussed previously, BAAQMD recently adopted revised CEQA thresholds of significance on June 2, 2010. The BAAQMD has also published a companion document, *California Environmental Quality Act Air Quality Guidelines,*[35] which provides recommended methodologies for assessing air quality impacts under CEQA. The BAAQMD's revised CEQA thresholds of significance update the plan-level thresholds for criteria air pollutants and precursors as well as $PM_{2.5}$ and TACs. The thresholds also address greenhouse gases (GHGs) (see Section V.I [Greenhouse Gas Emissions] of this EIR for a discussion of proposed thresholds for GHGs). BAAQMD adopted two sets of thresholds, one that would apply to specific development projects, and another threshold that would apply to plan-level CEQA analyses. According to the BAAQMD, the recently adopted thresholds of significance for criteria air pollutants, $PM_{2.5}$ and TACs associated with both cancer and non-cancer inducing health risks as well as GHGs are intended to apply to environmental analyses that have begun on or after adoption of the revised CEQA thresholds. Thresholds pertaining to the health risk impacts of sources upon sensitive receptors are intended to apply to environmental analyses begun on or after January 1, 2011. Therefore, the proposed project would be subject to the thresholds identified in BAAQMD's *1999 CEQA Guidelines*. However, in anticipation of BAAQMD adopting revised thresholds of significance, an analysis of the proposed project's impact with respect to the recently adopted CEQA significance thresholds was performed.

The proposed 2004 and 2009 Housing Elements are an update to the City's General Plan and therefore, the BAAQMD's plan-level thresholds would be the applicable thresholds to apply to the proposed Housing Elements:

Criteria Air Pollutants and Precursor Emissions

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[35] Bay Area Air Quality Management District. California Environmental Quality Act Air Quality Guidelines. May 2010. This document is available online at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx. Accessed June 15, 2010.

- Consistency with current Clean Air Plan control measures;
- The projected VMT or vehicle trip increase is less than or equal to projected population increases;

Health Risks and Hazards (TACs and $PM_{2.5}$)

- Land use diagrams identifying overlay zones of existing and planned sources of TACs and overlay zones of at least 500 feet from all freeways and high-volume roadways.
- Identification of goals, policies, and objectives to minimize potential impacts of sources of TACs and their impacts on sensitive receptors.

The impacts of the proposed Housing Elements with respect to the recently adopted requirements, which differ from the currently applicable requirements, are described below.

Criteria Air Pollutants and Precursor Emissions

Modifications from 1999 CEQA Guidelines Requirements

The recently adopted guidelines differ from the 1999 guidelines by removing the requirement of comparing the plan's anticipated population growth with the Clean Air Plan growth projections. Instead, the proposed guidelines recommend comparing the anticipated VMT with the plan's growth rate. This proposed threshold achieves the same goals as the Air District's current approach while alleviating the existing analytical difficulties and the inconsistency of comparing a plan update with a Clean Air Plan's growth projections.

Impact Conclusion Based on Recently Adopted Thresholds of Significance

As stated in Impact AQ-1, VMT from future residential growth is anticipated to increase by 8.4 percent between 2000 and 2025. During the same timeframe, ABAG projections forecast a population growth of 10.6 percent in the City. As the increase in VMT is anticipated to be less than the population growth, the proposed Housing Elements impact on criteria air pollutants and precursor emissions would remain ***less than significant***.

TACs and $PM_{2.5}$

Modifications from 1999 Guidelines Requirements

The recently adopted BAAQMD guidelines indicate that local plans would have a less-than-significant impact with respect to potential health risks and hazards (TACs) if overlay zones are established around existing and proposed land uses that would emit TACs. Overlay zones that are designed to avoid risk impacts would be reflected in local plan policies, land use maps, and implementing ordinances (e.g., zoning ordinance). BAAQMD would provide guidance as to the methods used to establish the TAC buffers and the standards to be applied for acceptable exposure levels. Special overlay zones of at least 500 feet (or an appropriate distance determined by modeling and approved by the Air District) on each side of all freeways and high volume roadways would be included in this proposed threshold.

Impact Conclusion Based on Recently Adopted Thresholds of Significance

At this time, the BAAQMD has not developed a reliable source inventory database that would be used to develop the overlay zones for point source emissions of either recognized TACs or $PM_{2.5}$. As discussed previously, the existing inventory of point sources is highly inaccurate in both emissions inventory and location of emissions. Thus, at this time, it is not possible to generate accurate overlay zones. However, as described in Impact AQ-3, this EIR conservatively assumes that stationary sources could occur throughout the City. Further, roadway emissions in the City comprise the majority of TAC emission sources. As discussed above, the SFDPH has modeled roadway $PM_{2.5}$ emissions, and pursuant to Article 38, have developed regulations to address new residential receptors located in impacted areas. Thus, as described in Impact AQ-3, the Air Quality Element and Transportation Element policies in conjunction with compliance with Article 38 would reduce impacts related to TRPs by limiting new receptors from existing sources, such as vehicles, and considering the location of new developments in relation to existing sources of air pollution. These policies would reduce potential impacts not only in areas that would be within overlay zones, but throughout the entire City. Furthermore, any new development would be subject to project-level environmental review including an analysis of the project's potential to expose sensitive receptors to air pollutants in accordance with BAAQMD guidance for the analysis of air pollutants and significance thresholds. Therefore, impacts related to TACs and $PM_{2.5}$ would be ***less than significant***.

V. ENVIRONMENTAL SETTING AND IMPACTS
I. GREENHOUSE GAS EMISSIONS

INTRODUCTION

This section provides a discussion of global climate change, existing regulations pertaining to global climate change, and potential greenhouse gas (GHG) emissions resulting from the 2004 Housing Element and 2009 Housing Element policies. Data used to prepare this section were taken from the following source:

- Technical Memorandum from Bryan Chen, Christopher A. Joseph & Associates to Jessica Range, San Francisco Planning Department, Re: Approach to Evaluating Greenhouse Gas Impacts in the 2004 and 2009 Housing Element EIR dated May 28, 2010 (GHG Memorandum) (See Appendix G).

BACKGROUND

The earth's natural warming process is known as the "greenhouse effect." The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass allows solar radiation (sunlight) into the Earth's atmosphere, but prevents radiative heat from escaping, thus warming the Earth's atmosphere. Greenhouse gases (GHGs) keep the average surface temperature of the Earth close to a hospitable 60 degrees Fahrenheit. However, excessive concentrations of GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (during motorized transport, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.) and deforestation, as well as agricultural activity and the decomposition of solid waste.

Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[1] While the increase in temperature is known as "global warming," the resulting change in weather patterns is known as "global climate change." Global climate change is evidenced in changes to wind patterns, storms, precipitation, and air temperature.

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[1] Climate Change 101: Understanding and Responding to Global Climate Change, published by the Pew Center on Global Climate Change and the Pew Center on the States. http://www.pewclimate.org/global-warming-basics/climate_change_101.

GHG Components

The primary GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and water vapor. Water vapor is the most abundant GHG in the atmosphere but is not considered a pollutant in the atmosphere as it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other gases that contribute to the greenhouse effect include ozone,[2] chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and aerosols. However, these latter GHGs are generally emitted during industrial processes. This analysis, therefore, considers those GHGs most likely to be emitted as a result of future residential development: carbon dioxide, methane, and nitrous oxide and are discussed in further detail below:

Carbon dioxide. CO_2 is an odorless, colorless gas, which has both natural and anthropogenic (arising from human activities) sources. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of carbon dioxide occur from the burning coal, oil, natural gas, and wood. Sources of CO_2 emissions in California are mainly associated with in-state fossil fuel combustion (including natural gas use, electricity generation, and motor vehicle use) and fossil fuel combustion in out-of-state power plants supplying electricity to California. Other activities that produce CO_2 emissions include mineral production, waste combustion, and land use changes that reduce the geographic extent of vegetation.

Methane. CH_4 is a flammable gas and is the main component of natural gas. When one molecule of methane is burned in the presence of oxygen, one molecule of carbon dioxide and two molecules of water are released. A natural source of methane is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle.

Nitrous oxide. N_2O, also known as laughing gas, is produced naturally by microbial processes in soil and water. Anthropogenic sources of nitrous oxide include agricultural sources, industrial processing, fossil fuel-fired power plants, and vehicle emissions. Nitrous oxide is also used as an aerosol spray propellant and in medical applications.

Global Warming Potential

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties that can be used to estimate the potential future impacts of emissions of different gases upon the climate system in a relative sense. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of carbon dioxide, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of carbon dioxide. Multiplying the gas-specific GWP by the respective gas' emissions results in the carbon dioxide equivalent (CO_2e). A summary of the atmospheric lifetime and GWP of selected gases is presented in Table V.I-1. As indicated, GWP ranges from 1 to 22,000.

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[2] Ozone is a GHG; however, unlike other GHGs, ozone in the troposphere is relatively short-lived. It is difficult to make an accurate determination of the contribution of ozone precursors (nitrogen oxides and volatile organic compounds) to global climate change. California Environmental Protection Agency, 2004.

Table V.I-1
Atmospheric Lifetimes and Global Warming Potentials

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50 – 200	1
Methane	12 (+/-3)	23
Nitrous Oxide	120	296
HFC-23	264	12,600
HFC-134a	14.6	1,300
HFC-152a	1.5	120
PFC: Tetrafluoromethane (CF_4)	50,000	5,700
PFC: Hexafluoroethane (C_2F_6)	10,000	11,900
Sulfur Hexafluoride (SF_6)	3,200	22,000

Source: *United States EPA, 2006.*

ENVIRONMENTAL SETTING

Existing State-wide GHG Inventory

The California Energy Commission (CEC) published the *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004* in December 2006. This report indicates that California emitted between 425,000,000 and 468,000,000 metric tons (MT) CO_2e in 1990. As reported by the CEC, California contributes 1.4 percent of global, and 6.2 percent of national, GHG emissions.[3] Approximately 80 percent of GHGs in California are CO_2 produced from fossil fuel combustion. Although California is the second largest contributor of GHG in the U.S, it has the second lowest per capita CO_2 emission rate in the nation. Between 1990 and 2000, California's population grew by 4.1 million people and during the 1990 to 2003 period, California's gross state product grew by 83 percent (in dollars, not adjusted for inflation). However, California's GHG emissions grew by only 12 percent between 1990 and 2003. The report concludes that California's ability to slow the rate of growth of GHG emissions is largely due to the success of its energy efficiency, renewable energy programs, and commitment to clean air and clean energy. The State's programs and commitments lowered its GHG emissions rate of growth by more than half of what it would have been otherwise.

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[3] California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, CEC-600-2006-013, October 2006.

Existing Regional GHG Inventory

In February 2010, the Bay Area Air Quality Management District (BAAQMD) published an update to their December 2008 document entitled, *Source Inventory of Bay Area Greenhouse Gas Emissions*.[4] This document presents a GHG inventory for the San Francisco Bay Area, which reflects the estimated 2007 GHG emissions for the nine counties located in the jurisdiction of the BAAQMD: Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Napa, and the southern portions of Solano and Sonoma counties. This GHG inventory is based on the standards for criteria pollutant inventories and is intended to support the BAAQMD's climate protection activities.

Table V.I-2 below shows the regional (Bay Area) 2007 GHG emissions from existing direct and indirect GHG sources. The emissions are estimated for existing industrial, commercial, transportation, residential fuel use, forestry, and agriculture activities. The estimated GHG emissions are presented in CO_2e, which weight each GHG by its GWP (as previously discussed).

Table V.I-2
2007 Estimated Regional Greenhouse Gas Emissions

Emissions Source	Emissions in Million MT CO2e Per Year (Base Year 2007)
Industrial/Commercial	34.86
Residential Fuel	6.82
Electricity/Co-Generation	15.20
Off-Road Equipment	2.92
Transportation	34.87
Agricultural/Farming	1.11
Total Emissions	**95.8**

Source: Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions, February 2010.

Existing Local GHG Inventory

In 2008 San Francisco commissioned an independent review of the City's communitywide GHG emissions. The final report, titled *Community GHG Inventory Review*, assessed the emissions inventory for the San Francisco Climate Action Plan (discussed later), base year 1990, and the City's GHG emissions inventory for years 2000 and 2005.[5] The report found that in 1990, the City's total annual emissions were 7,490,000 MT CO_2e per year,[6] which constitutes approximately 1.76 percent of the 1990 emissions estimated in the statewide GHG emissions inventory. The two primary sources of emissions from San Francisco, according to the San Francisco Climate Action Plan (SFCAP), are transportation emissions and natural gas and electricity use. According to the SFCAP, San Francisco generated approximately 1,110,000 tons of solid waste in 2001, which was transported to the Altamont Landfill in eastern Alameda County. More than 75 percent of the methane produced from solid waste disposed of in the Altamont Landfill is recovered and flared off or used as fuel. In addition, as reported in the SFCAP in 2004, approximately 48 percent of solid waste in San Francisco is diverted through recycling (San Francisco currently recovers 72 percent of discarded material).

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[4] Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions. Updated February 2010.

[5] City and County of San Francisco: Community GHG Inventory Review. *August 1, 2008. IFC International, 394 Pacific Avenue, 2nd Floor, San Francisco, CA 94111. Prepared for City and County of San Francisco, Department of the Environment.*

[6] Ibid.

Projected Impacts of Global Warming in California

According to the 2006 California Climate Action Team (CAT) Report, temperature increases arising from increased GHG emissions could potentially result in a variety of impacts to the people, economy, and environment of California associated with a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming. If emissions from GHGs are not reduced significantly, the increase in warming could have the following consequences in California[7] and described in further detail below:

- **Decreased Water Supply**: The Sierra snowpack would decline by between 70 and 90 percent, threatening California's water supply;
- **Diminished Air Quality:** Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes;
- **Accelerated Sea Rise and Flooding:** Erosion of California's coastlines would increase as well as increased sea water intrusion; and
- **Stressed Ecosystem:** Pest infestation and vulnerability to fires of the State's forests would increase.

Water Supply

California Health and Safety Code Section 38501(a) recognizes that "[climate change] poses a serious threat to the economic well-being, public health, natural resources, and the environment of California," and notes, "the potential adverse impacts of [climate change] include…reduction in the quality and supply of water to the state from the Sierra snowpack." As most of the State, including San Francisco, depends on surface water supplies originating in the Sierra Nevada this water supply reduction is a concern.

Most of the scientific models addressing climate change show that the primary effect on California's climate would be a reduced snow pack and a shift in stream-flow seasonality. A higher percentage of the winter precipitation in the mountains would likely fall as rain rather than as snow in some locations, reducing the overall snowpack. Further, as temperatures rise, snowmelt is expected to occur earlier in the year, with peak runoff likely to come a month or so earlier. The end result of this would be that the state may not have sufficient surface storage to capture the resulting early runoff, and so, absent construction of additional water storage projects, a portion of the current supplies would be lost to the oceans, rather than be available for use in the state's water delivery systems.

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[7] California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.

A decrease in snowpack volume is predicted from the current 87 percent of historic averages to 83 percent in 2025 and 76 percent in 2050.[8] Changing climatic conditions could also shift the timing of snowmelt, so that peak runoff would occur earlier in the spring. This shift could affect the availability of the seasonal water supply, particularly during the hot summer months. However, the San Francisco Public Utility Commission (SFPUC) states that the effect of climate change in 2025 would likely be within range of current annual variation (with a slight shift in runoff timing).[9]

Air Quality

Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency, and could adversely affect the elderly, children, and the homeless.

Sea Level Rise and Flooding

The California Climate Change Center predicts that sea level in California would rise between 10.9 to 71.6 centimeters (cm) (0.36 to 2.3 feet) above existing mean sea level (msl) by 2099 as a result of climate change.[10] When combined with astronomical tides, even a one-foot increase in msl would result in the 100-year event high tide peak occurring at the 10-year event frequency.[11]

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[8] California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.

[9] San Francisco Public Utilities Commission, 2008. Modeling, Coalition Building, and Adaptation Response: San Francisco's Approach to Climate Change. Presentation made by Michael Carlin, Assistant General Manager, Water Enterprise, April 10, 2008.

[10] Cayan, D., P. Bromirski, K. Hayhoe, M. Tyree, M. Dettinger, and R. Flick. 2006. Projecting Future Sea Level: Table 3 Projected global sea level rise (SLR) (cm) for the SRES A1fi, A2, and B1 greenhouse gas emission scenarios. SLR for A2 and B1 scenarios is estimated by combining output recent global climate change model simulations with MAGICC projections for the ice melt component. SLR estimates for A1fi estimated from MAGICC based on A2 temperature changes scaled according to those in A1fi. A Report from the California Climate Change Center CEC-500-2005-2002-SF. Other sources, such as the Bay Conservation and Development Commission (BCDC), project a 55-inch (approximately 140 cm) sea level rise increase by the end of the century.

[11] Floyd, M., M. Anderson, M. Roos, R. Peterson, M. Perrone, and D. Todd. 2006. Chapter 2: Potential Impacts of Climate Change on California's Water Resources, Figure 2.32 Impact of One Foot Sea Level rise on the Relative Effect of Astronomical tides in the Delta. p. 2-53. In Medelin, J., J. Harou, M. Olivares, J. Lund, R.

In the future, precipitation events are predicted to vary in terms of timing, intensity, and volume according to many climate change models.[12] Extreme storm events may occur with greater frequency.[13] The effect on peak runoff is not known because most climate change models have not used a temporal (or spatial) scale necessary to identify effects on peak flows, and existing precipitation/runoff models for assessing the effects of climate change do not yet adequately predict rainfall/runoff scenarios.[14] Additional discussion regarding Sea Level Rise is presented in Section V.P, Hydrology and Water Quality.

Stressed Ecosystems

Climate change is expected to have effects on diverse types of ecosystems, from alpine to deep-sea habitat. As temperatures and precipitation change, seasonal shifts in vegetation would occur; this could affect the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The Intergovernmental Panel on Climate Change (IPCC) states that "20 percent to 30 percent of species assessed may be at risk of extinction from climate change impacts within this century if global mean temperatures exceed 2 to 3°C (3.6 to 5.4°F) relative to pre-industrial levels."[15] Shifts in existing biomes could also make ecosystems vulnerable to invasive species encroachment. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. In general terms, climate change is expected to put a number of stressors on ecosystems, with potentially catastrophic effects on biodiversity.

California-Specific Adaptation Strategies

Because climate change is already affecting California and current emissions will continue to drive climate change in the coming decades, regardless of any mitigation measures that may be adopted, the necessity of adaptation to the impacts of climate change is recognized by the State of California. The 2009 California Climate Adaptation Strategy Discussion Draft begins what will be an ongoing process of

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Howitt, S. Tanaka, M. Jenkins, K. Madani, and T. Zhu (Eds), Climate Warming and Water Supply Management In California: White Paper. A Report From Climate Change Center CEC-500-2005-195-SF.

[12] EPA, 2008. Climate Change Science: Precipitation and Storm Changes. http://www.epa.gov/climatechange/science/recentpsc.html (accessed January 16, 2009).

[13] EPA, 2008. Climate Change Science: Precipitation and Storm Changes. http://www.epa.gov/climatechange/science/recentpsc.html (accessed January 16, 2009).

[14] Anderson. M. 2006. Chapter 6: Climate Change Impacts on Flood Management p. 6-22 and 6-27. In Medelin, J., J. Harou, M. Olivares, J. Lund, R. Howitt, S. Tanaka, M. Jenkins, K. Madani, and T. Zhu (Eds), Climate Warming and Water Supply Management In California: White Paper. A Report From Climate Change Center CEC-500-2005-195-SF.

[15] IPCC, 2007: Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom, 1000 pp.

adaptation, as directed by Gov. Schwarzenegger's Executive Order S-13-08. The goals of the strategy are to analyze risks and vulnerabilities and identify strategies to reduce the risks of climate change. Once the strategies are identified and prioritized, government resources would be identified. Finally, the strategy includes identifying research needs and public education.

Climate change risks are evaluated using two distinct approaches: (1) projecting the amount of climate change that may occur using computer-based global climate models and (2) assessing the natural or human system's ability to cope with and adapt to change by examining past experience with climate variability and extrapolating this to understand how the systems may respond to the additional impact of climate change. The major anticipated climate changes expected in the State of California include increases in temperature, decreases in precipitation, particularly as snowfall, and increases in sea level, as discussed above. These gradual changes will also lead to an increasing number of extreme events, such as heat waves, wildfires, droughts, and floods. This would impact public health, ocean and coastal resources, water supply, agriculture, biodiversity, and the transportation and energy infrastructures.

Key preliminary adaptation recommendations included in the *Strategy* are as follows:

- Appointment of a Climate Adaptation Advisory Panel;
- Improved water management in anticipation of reduced water supplies, including a 20 percent reduction in per capita water use by 2020;
- Consideration of project alternatives that avoid significant new development in areas that cannot be adequately protected from flooding due to climate change;
    - Preparation of agency-specific adaptation plans, guidance or criteria by September 2010;
    - Consideration of climate change impacts for all significant state projects;
    - Assessment of climate change impacts on emergency preparedness;
    - Identification of key habitats and development of plans to minimize adverse effects from climate change;
- Development of guidance by the California Department of Public Health by September 2010 for use by local health departments to assess adaptation strategies;
- Amendment of plans to assess climate change impacts and develop local risk reduction strategies by communities with General Plans and Local Coastal Plans; and
- Inclusion of climate change impact information into fire program planning by state fire fighting agencies.

REGULATORY SETTING

Federal

In the past, the U.S. EPA has not regulated GHGs under the Clean Air Act because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change. However, the U.S. Supreme Court recently held that the U.S. EPA must consider regulation of motor-vehicle GHG emissions.[16] The Court ruled that GHGs fit within the Clean Air Act's definition of a pollutant and that the U.S. EPA did not have a valid rationale for not regulating GHGs. In December 2009, the U.S. EPA issued an endangerment finding for GHGs under the Clean Air Act. This is the first step in regulating GHGs under the provisions of the Clean Air Act. In September 2009, the U.S. EPA issued the Mandatory GHG Reporting Rule. The regulation formalizes mandatory GHG reporting for a wide range of public and industrial sources and suppliers nationwide that is anticipated to cover approximately 85 percent of the nation's GHG emissions and apply to roughly 10,000 facilities.

In addition, on September 15, 2009, the National Highway Traffic Safety Administration and U.S. EPA announced a proposed joint rule that would explicitly tie fuel economy to GHG emissions reduction requirements. The proposed new Corporate Average Fuel Economy (CAFÉ) Standards would cover automobiles for model years 2012 through 2016, and would require passenger cars and light trucks to meet a combined, per mile, carbon dioxide emissions level. It is estimated that by 2016, this GHG emissions limit could equate to an overall light-duty vehicle fleet average fuel economy of as much as 35.5 miles per gallon.

State

In response to growing scientific and political concern with respect to global climate change, California has adopted a series of laws to reduce GHG emissions from commercial and private activities within the State.

Executive Order S-3-05

California Governor Arnold Schwarzenegger announced, on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. In response to the Executive Order, the Secretary of Cal/EPA created the Climate Action Team (CAT), which, in March 2006, published the Climate Action Team Report to Governor Schwarzenegger and the Legislature (the 2006 CAT Report). The 2006 CAT Report identifies a recommended list of strategies that the State could pursue to reduce GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the Governor's targets are met and can be met with the existing authority of State agencies.

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[16] Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 (2007)).

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill (AB 32), the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG emissions in California, and requires the California Air Resources Board (ARB), the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020. To achieve this goal, AB 32 mandates that the ARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

As a central requirement of AB 32, the ARB was assigned the task of developing a Scoping Plan that outlines the State's strategy to achieve the 2020 GHG emissions limit. On December 11, 2008, ARB adopted a Scoping Plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include a variety of emissions reduction measures, including a cap-and-trade program, strategies to enhance and expand proven cost-saving energy efficiency programs, California's clean cars standards, increases in the amount of clean and renewable energy used to power the State, and a low-carbon fuel standard that will make the fuels used in the State cleaner. Furthermore, the Scoping Plan also proposes full deployment of the California Solar Initiative, high-speed rail, water-related energy efficiency measures, and a range of regulations to reduce emissions from trucks and from ships docked in California ports. ARB has until January 1, 2011, to adopt the necessary regulations to implement that plan. Implementation of individual measures must begin no later than January 1, 2012, so that the emissions reduction target can be fully achieved by 2020.

In addition, the Scoping Plan required ARB to publish a list of discrete early action GHG emission reduction measures to be adopted and enforceable by January 1, 2010. These early action measures that are already being implemented include the following:

- A low-carbon fuel standard to reduce the "carbon intensity" of California fuels at least 10% by 2020;
- Reduction of refrigerant losses from motor vehicle air conditioning systems;
- Increased methane capture from landfills via state-of-the-art capture systems;
- Increased fuel efficiency of heavy-duty tractor trailers by requiring aerodynamic design and low rolling tires;
- Reduction of auxiliary engine emissions of docked ships by requiring port electrification;
- Reduction of perfluorocarbons from the semiconductor industry;

- Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
- Require that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and
- Restriction on the use of sulfur hexafluoride (SF_6) from non-electricity sectors if viable alternatives are available.

Senate Bill 97

In August 2007, the Legislature adopted Senate Bill 97 (SB 97), requiring the California Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources Agency by July 1, 2009. Following receipt of these guidelines, the Resources Agency must certify and adopt the guidelines prepared by OPR by January 1, 2010.

OPR submitted its proposed guidelines to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency undertook the formal rulemaking process to certify and adopt the amendments as part of the state regulations implementing CEQA and adopted the CEQA Guidelines Amendments on December 30, 2009.

In the CEQA Guideline Amendments, a threshold of significance for GHG emissions was not specified, nor does it prescribe assessment methodologies or specific mitigation measures. Instead, the amendments encourage lead agencies to consider many factors in performing a CEQA analysis of GHG emissions, but rely on the lead agencies in making their own significance threshold determinations based upon substantial evidence. The CEQA amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier from when they perform individual project analyses.

Senate Bill 375

In September of 2008 the California legislature adopted SB 375 legislation which: (1) relaxes CEQA requirements for some housing projects that meet goals for reducing GHG emissions and (2) requires the regional governing bodies in each of the state's major metropolitan areas to adopt, as part of their regional transportation plan, "sustainable community strategies" that will meet the region's target for reducing GHG emissions. SB 375 creates incentives for implementing the sustainable community strategies by allocating federal transportation funds only to projects that are consistent with the sustainable community strategies.

Other State Measures

The Governor and the California legislature have passed additional regulations with the intent of reducing GHG emissions in order to achieve AB 32 goals. These include the following:

- Executive Order S-01-07 establishing the Low Carbon Fuel Standard (LCFS) requires a 10% or greater reduction in the average carbon intensity for transportation fuels in California regulated by ARB (also a discrete early action measure).
- AB 1493 (Pavley Standard) requires ARB to adopt regulations to reduce GHG emissions for noncommercial passenger vehicles and light-duty trucks of model year 2009 and thereafter.
- Under Senate Bill 107, California's Renewable Portfolio Standard (RPS) requires retail suppliers of electric services to increase procurement from eligible renewable energy resources to 20% by 2010.
- California Executive Order S-14-08 mandates retail suppliers of electric services to increase procurement from eligible renewable energy resources to 33% by 2020.
- Senate Bill (SB) 1368 requires the California Public Utilities Commission (PUC) and CEC to establish GHG emission performance standards for the generation of electricity.

Regional

The BAAQMD is the primary agency responsible for comprehensive air pollution control in the entire San Francisco Bay Area Air Basin. As such, the BAAQMD works directly with the Association of Bay Area Governments, the Metropolitan Transportation Commission, and local governments and cooperates actively with all federal and state government agencies. The BAAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

BAAQMD has published a document titled *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans* (BAAQMD CEQA Guidelines, December 1999). In that document BAAQMD provides guidance and recommendations on the methodologies of analysis and suggested thresholds of significance that Lead Agencies can use when analyzing air quality impacts during CEQA review of projects. This document does not address climate change or GHG emissions.

The BAAQMD recently updated their 1999 CEQA Air Quality Guidelines (referenced above) and adopted significance thresholds for GHGs on June 2, 2010. The updated CEQA Air Quality Guidelines includes significance thresholds, assessment methodologies, and mitigation strategies for GHG emissions. The recently adopted GHG thresholds of significance, as discussed in BAAQMD's May 2010 CEQA Air Quality Guidelines, includes two sets of GHG thresholds: one that would apply to specific development projects, and another threshold that would apply to plan-level CEQA analyses. The proposed 2004 and 2009 Housing Elements are an update to the City's General Plan and therefore, the plan-level threshold would be the applicable threshold for the proposed Housing Elements. However, as discussed in Section V.H (Air Quality), according to the BAAQMD, the recently adopted thresholds of significance for GHGs are intended to apply to environmental analyses that have begun on or after adoption of the revised CEQA thresholds (June 2, 2010). Therefore, the proposed project would not be subject to BAAQMD's recently adopted thresholds of significance. However, in anticipation of BAAQMD adopting revised thresholds of significance, an analysis of the proposed project's impact with respect to the recently adopted CEQA significance thresholds was performed. The BAAQMD plan-level GHG thresholds include the following two CEQA significance thresholds:

- Consistency with a "Qualified GHG Reduction Strategy"; or
- An efficiency metric of 6.6 MT CO_2e per service population [residents + employees] (SP) per year by 2020.[17]

If a jurisdiction can demonstrate that it meets the criteria for a Qualified GHG Reduction Strategy, and the plan being evaluated is consistent with such a plan, the plan's GHG emissions could be determined to be less than significant. Similarly, if a plan can be shown to generate GHG emissions below the efficiency threshold, the plan's GHG emissions would not be considered significant.

Local

In addition to the State's GHG reduction strategy (AB 32), the City has developed its own strategy to address GHG emissions on a local level. The vision of the strategy is expressed in the SFCAP, however implementation of the strategy is appropriately articulated within other citywide plans (*General Plan, Sustainability Plan*, etc.), policies (Transit-First Policy, Precautionary Principle Policy, etc.), and regulations (Green Building Ordinance, etc.). The following plans, policies and regulations highlight some of the main components of San Francisco's GHG reduction strategy.

Overall GHG Reduction Sector

San Francisco Sustainability Plan. In July 1997 the Board of Supervisors endorsed the Sustainability Plan for the City of San Francisco establishing sustainable development as a fundamental goal of municipal public policy.

The Climate Action Plan for San Francisco. In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) setting a goal for the City and County of San Francisco to reduce GHG emissions to 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the Public Utilities Commission published the *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions*.[18] The SFCAP provides the context of climate change in San Francisco and examines strategies to meet the 20 percent GHG reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions have been implemented or are now in progress.

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[17] Bay Area Air Quality Management District. California Environmental Quality Act Air Quality Guidelines. May 2010. This document is available online at: www.baaqmd.gov. Accessed June 15, 2010.

[18] San Francisco Department of the Environment and San Francisco Public Utilities Commission, Climate Action Plan for San Francisco, Local Actions to Reduce Greenhouse Emissions, September 2004.

Greenhouse Gas Reduction Ordinance. In May 2008, San Francisco adopted an ordinance amending the San Francisco Environment Code to establish City GHG emission targets and departmental action plans, to authorize the Department of the Environment to coordinate efforts to meet these targets, and to make environmental findings. The ordinance establishes the following GHG emission reduction limits for San Francisco and the target dates to achieve them:

- Determine 1990 City GHG emissions by 2008, the baseline level with reference to which target reductions are set;
- Reduce GHG emissions by 25 percent below 1990 levels by 2017;
- Reduce GHG emissions by 40 percent below 1990 levels by 2025; and
- Reduce GHG emissions by 80 percent below 1990 levels by 2050.

The ordinance also specifies requirements for City departments to prepare departmental Climate Action Plans that assess, and report to the Department of the Environment, GHG emissions associated with their department's activities and activities regulated by them, and prepare recommendations to reduce emissions. As part of this, the San Francisco Planning Department is required to: (1) update and amend the City's applicable *General Plan* elements to include the emissions reduction limits set forth in this ordinance and policies to achieve those targets; (2) consider a project's impact on the City's GHG reduction limits specified in this ordinance as part of its review under CEQA; and (3) work with other City departments to enhance the "transit first" policy to encourage a shift to sustainable modes of transportation thereby reducing emissions and helping to achieve the targets set forth by this ordinance.

Transportation Sector

Transit First Policy. In 1973 San Francisco instituted the Transit First Policy (Article 8A, Section 8A.115. of the City Charter) with the goal of reducing the City's reliance on freeways and meeting transportation needs by emphasizing mass transportation. The Transit First Policy gives priority to public transit investments; adopts street capacity and parking policies to discourage increased automobile traffic; and encourages the use of transit, bicycling and walking rather than use of single-occupant vehicles.

San Francisco Municipal Transportation Agency's Zero Emissions 2020 Plan. The SFMTA's Zero Emissions 2020 plan focuses on the purchase of cleaner transit buses including hybrid diesel-electric buses. Under this plan hybrid buses will replace the oldest diesel buses, some dating back to 1988. The hybrid buses emit 95 percent less particulate matter (PM, or soot) than the buses they replace, they produce 40 percent less oxides of nitrogen (NOx), and they reduce GHGs by 30 percent.

San Francisco Municipal Transportation Agency's Climate Action Plan. In November 2007 voters passed Proposition A, requiring the SFMTA to develop a plan to reach a 20 percent GHG reduction below 1990 levels by 2012 for the City's entire transportation sector, not just SFMTA's internal operations. SFMTA has prepared a *Draft Climate Action Plan* outlining measures needed to achieve these targets.

Commuter Benefit Ordinance. The Commuter Benefit Ordinance (Environment Code, Section 421), effective January 19, 2009, requires all employers in San Francisco that have 20 or more employees to offer one of the following benefits: (1) A Pre-tax Transit Benefit, (2) Employer Paid Transit Benefits, or (3) Employer Provided Transit.

The City's *Planning Code* reflects the latest smart growth policies and includes: electric vehicle refueling stations in city parking garages, bicycle storage facilities for commercial and office buildings, and zoning that is supportive of high density mixed-use infill development. The City's more recent area plans, such as Rincon Hill and the Market and Octavia Area Plan, provide transit-oriented development policies that allow for neighborhood-oriented retail and services and where off-street parking is limited to accessory parking spaces.[19] At the same time there is also a community-wide focus on ensuring San Francisco's neighborhoods as "livable" neighborhoods, including the Better Streets Plan that would improve San Francisco's streetscape, the Transit Effectiveness Plan, that aims to improve transit service, and the Bicycle Plan, all of which promote alternative transportation options.

Renewable Energy

The Electricity Resource Plan (Revised December 2002). San Francisco adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco's southeast community, home of two power plants. The plan presents a framework for assuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

Go Solar SF. On July 1, 2008, the San Francisco Public Utilities Commission (SFPUC) launched their "GoSolarSF" program to San Francisco's businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system, and more to those qualifying as low-income residents. The San Francisco Planning Department and Department of Building Inspection have also developed a streamlining process for Solar Photovoltaic (PV) Permits and priority permitting mechanisms for projects pursuing LEED® Gold Certification.

Green Building

LEED® Silver for Municipal Buildings. In 2004, the City amended Chapter 7 of the Environment code, requiring all new municipal construction and major renovation projects to achieve LEED® Silver Certification from the US Green Building Council.

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[19] See *Planning Code* Sections 206.4 and 155.1.

City of San Francisco's Green Building Ordinance. On August 4, 2008, Mayor Gavin Newsom signed into law San Francisco's Green Building Ordinance for newly constructed residential and commercial buildings and renovations to existing buildings. The ordinance specifically requires newly constructed commercial buildings over 5,000 square feet (sq. ft.), residential buildings over 75 feet in height, and renovations on buildings over 25,000 sq. ft. to be subject to an unprecedented level of LEED® and green building certifications, which makes San Francisco the city with the most stringent green building requirements in the nation. Cumulative benefits of this ordinance includes reducing CO_2 emissions by 60,000 tons, saving 220,000 megawatt hours of power, saving 100 million gallons of drinking water, reducing waste and stormwater by 90 million gallons of water, reducing construction and demolition waste by 700 million pounds, increasing the valuations of recycled materials by $200 million, reducing automobile trips by 540,000, and increasing green power generation by 37,000 megawatt hours.[20]

Waste Reduction

Zero Waste. In 2004, the City of San Francisco committed to a goal of diverting 75 percent of its' waste from landfills by 2010, with the ultimate goal of zero waste by 2020. San Francisco currently recovers 72 percent of discarded material.

Construction and Demolition Debris Recovery Ordinance. In 2006 the City of San Francisco adopted Ordinance No. 27-06, requiring all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65% of the material from landfills. This ordinance applies to all construction, demolition and remodeling projects within the City.

Universal Recycling and Composting Ordinance. Signed into law on June 23, 2009, this ordinance requires all residential and commercial building owners to sign up for recycling and composting services. Any property owner or manager who fails to maintain and pay for adequate trash, recycling, and composting service is subject to liens, fines, and other fees.

The City has also passed ordinances to reduce waste from retail and commercial operations. Ordinance 295-06, the Food Waste Reduction Ordinance, prohibits the use of polystyrene foam disposable food service ware and requires biodegradable/compostable or recyclable food service ware by restaurants, retail food vendors, City Departments and City contractors. Ordinance 81-07, the Plastic Bag Reduction Ordinance, requires many stores located within the City and County of San Francisco to use compostable plastic, recyclable paper and/or reusable checkout bags.

Each of the policies and ordinances discussed above include measures that would decrease the amount of GHGs emitted into the atmosphere and decrease San Francisco's overall contribution to climate change.

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[20] These findings are contained within the final Green Building Ordinance, signed by the Mayor August 4, 2008.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

As climate change is an irreversible, significant cumulative impact on a global scale, consideration of an impact to climate change is essentially an analysis of the contribution to a cumulatively significant global impact through its emission of GHGs and therefore addressed in the cumulative evaluation.

As discussed previously, the 2004 Housing Element and 2009 Housing Element would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

Cumulative Impacts

Impact GH-1: The proposed Housing Elements would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. (Less than Significant)

The subject of this EIR is the proposed revision of the Housing Element of the San Francisco General Plan. The 2004 and 2009 Housing Elements are updates to the 1990 Residence Element of the San Francisco General Plan, a public policy document that addresses issues of housing needs for San Francisco residents and households. As discussed above, new residential development would occur regardless of the proposed Housing Elements; the proposed Housing Elements provide direction for how new housing should occur.

The most common GHGs resulting from human activity are CO_2, CH_4, and N_2O.[21] State law defines GHGs to also include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These latter GHG compounds are usually emitted in industrial processes, and therefore not applicable to the proposed project. Residential uses contribute to the cumulative effects of climate change by emitting GHGs during construction and operational phases. Residential uses emit both direct and indirect GHG emissions during operations. Operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with landfill operations. As described in Section V.D (Population and Housing), approximately 41,651 housing units are projected to be developed between 2009 and 2025 to accommodate projected population growth. A GHG analysis was conducted to determine increased GHG emissions from anticipated population and housing growth as determined by ABAG projections.[22] GHG emissions were calculated for the years 2009, the baseline of existing conditions, the year 2020, California's interim target year for GHG reductions as codified by AB 32 and the year 2025, the horizon year for which cumulative effects are analyzed in this EIR. GHG emissions for the long-term target year of 2050 established in Executive Order S-3-05 is beyond the timeframe of the Housing Elements and was not evaluated. The GHG calculation presented in this analysis includes an estimate of emissions from CO_2, N_2O, and CH_4. The GHG analysis assumed approximately 1.7 percent of the projected new housing units would be single-family units, while the remaining would be multi-family units.[23] Results of this analysis are discussed below.

Construction

During construction activities at individual development sites, the consumption of fuel by on-site construction equipment would generate GHG emissions. URBEMIS 2007 v.9.2.4 was used to model the annual amount of CO_2 emissions generated by on-site equipment during construction activities. Methane and nitrous oxide emissions for construction were obtained from the California Climate Action Registry (CCAR) Protocol, as URBEMIS provides only CO_2 emissions. The emissions accounted for include the use of construction equipment during grading, construction and paving, haul truck trips associated with construction, construction worker trips, and construction vendor trips. The construction schedule and specific building types of potential future new construction are unknown. For computational simplicity, construction emissions for all projected future housing units were calculated within a one-year timeframe and averaged over the total period for this projection to determine average construction emissions of new housing units over the projection periods.

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[21] Governor's Office of Planning and Research. Technical Advisory- CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review. June 19, 2008. Available at the Office of Planning and Research's website at: http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf. Accessed March 3, 2010.

[22] GHG Memorandum dated May 28, 2010.

[23] This assumption is based on the current ratios of single-family homes and multi-family homes as compared to land available to accommodate new single-family homes and multi-family homes (housing capacity).

Operations

During operation of future projected housing development, the consumption of fossil fuels is necessary to generate electricity, provide heating and hot water for residential uses, propel landscaping equipment, convey, transport, and treat water, and operate on-road motor vehicles. The consumption of these fossil fuels creates GHG emissions. Additionally, solid waste generation will result in GHG emissions from landfill operations.

Natural Gas Use

CO_2 emissions resulting from residential natural gas use can also be modeled using URBEMIS 2007 v.9.2.4. However, the default consumption rates are based on data from the South Coast Air Quality Management District. Therefore, natural gas use by census tract for the City and County of San Francisco was obtained from Pacific Gas and Electric (PG&E)[24]. Mean annual natural gas use was obtained for both single-family and multifamily units. The GHG emission factors from the CCAR Protocol for natural gas were then applied to the respective consumption rates, to calculate annual GHG emissions in metric tons.

Electricity Use

Electricity use data was obtained from the same source as for natural gas use. Mean annual electricity use was obtained for both single-family and multifamily units. The CO_2 emission factor was based on the 2007 PG&E Power/Utility Reporting Protocol report obtained from the CCAR database. Methane and nitrous oxide emissions for electricity were obtained from the CCAR Protocol, as no PG&E-specific emission factors for these GHGs were available.

Water Use

Water consumption was based on data from the SFPUC, *City and County of San Francisco Retail Water Demands and Conservation Potential* report[25]. Daily water use was calculated for single-family and multifamily units for each of the evaluated years. A water-related energy intensity relationship value of 4,000 kilowatt hours per million gallon was used as identified in the CEC's California's Water-Energy Relationship document for Northern California[26]. This energy intensity factor accounts for the energy required to convey, pump and treat water and wastewater. The GHG emission factors associated with the energy required for the conveyance, treatment, and distribution of the water are the same as those used for electricity use.

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[24] PG&E data provided by San Francisco Planning Department, March 16, 2010.

[25] SFPUC. City and County of San Francisco Retail Water Demands and Conservation Potential. November 2004.

[26] CEC. California's Water-Energy Relationship, November 2005.

Waste Generation

Residential waste disposal rates were based on a per capita value of 0.42 tons of waste per resident per year based on disposal information for San Francisco County obtained from the California Integrated Waste Management Board's Residential Waste Disposal Rates. A diversion rate of 72 percent was used to estimate the amount of solid waste that would not be diverted to landfills. GHG emissions from the Altamont Landfill were obtained from the BAAQMD for the year 2005.

Vehicle Travel

The on-road mobile vehicle miles per day and vehicle fleet mix from future residential development were estimated using the URBEMIS 2007 v.9.2.4 computer model. The assumed fuel efficiency was based upon the Bureau of Transportation Statistics for passenger cars and light trucks and the CCAR Protocol for medium and heavy-duty trucks. The GHG emission factors from the CCAR Protocol for motor vehicles were applied to calculate annual GHG emissions in metric tons.

Landscaping Equipment

GHG emissions from landscape equipment use were estimated using the URBEMIS 2007 v.9.2.4 computer model. Results were converted to metric tons for reporting consistency.

Table V.I-3, below, presents the GHG emissions form operational sources associated with projected growth in new housing units for the baseline year, 2009. As shown in Table V.I-3, the vast majority of GHG emissions are associated with motor vehicle use, with energy consumption (natural gas and electricity) the second largest source of GHG emissions.

Table V.I-3
Baseline Greenhouse Gas Emissions from Residential Development (2009)

Emissions Source		**GHG Emissions (MT CO_2e per year)**
Operational Emissions	Natural Gas Consumption	324,452
	Electricity Use	207,709
	Water Consumption	17,435
	Waste Generation	9,961
	Motor Vehicle Use	3,791,396
	Landscape Equipment Use	36
	Total Operational	4,350,988

Source: Christopher A. Joseph & Associates, May 2010. Calculation data and results provided in GHG Memorandum dated May 28, 2010.

Table V.I-4 presents the GHG emissions resulting from anticipated growth in new housing units for construction and operational sources for the years 2020 and 2025.

Table V.I-4
Projected Greenhouse Gas Emissions from Residential Development (2020 and 2025)

Emission Source		**GHG Emissions (MT CO_2e per year)** 2020	**GHG Emissions (MT CO_2e per year)** 2025
Construction Emissions		3,670	3,702
Operational Emissions	Natural Gas Consumption	349,572	360,989
	Electricity Use	223,790	231,099
	Water Consumption	17,378	17,499
	Waste Generation	10,687	11,017
	Motor Vehicle Use	4,088,369	4,219,837
	Landscape Equipment Use	39	40
	Total Operational	4,689,835	4,840,481

Note: Construction emissions include housing units constructed between 2009-2020 and 2009-2025 and are annualized over the projection period (11 years and 16 years, respectively).
Source: Christopher A. Joseph & Associates, May 2010. Calculation data and results provided in GHG Memorandum dated May 28, 2010.

As shown in Table V.I-4 annual construction GHG emissions were estimated to be 3,670 MT CO_2e per year for 2020 and 3,702 MT CO_2e per year for 2025. The construction emissions are substantially less than those estimated for operational emissions. Annual operation GHG emissions would result in 4,689,835 MT CO_2e in 2020 and 4,840,481 MT CO_2e in 2025. As with the baseline emissions, the vast majority of operational GHG emissions are associated with motor vehicle use.

Reductions from AB 32 Scoping Plan Measures

The estimates presented in Table V.I-4 do not account for anticipated State measures that would further reduce GHG emissions. The BAAQMD estimated the GHG emission reductions within the land use-driven sectors that are anticipated to occur from statewide implementation of the AB 32 Scoping Plan measures. GHG emission reductions associated with key AB 32 measures quantified by the BAAQMD include measures such as the Renewable Portfolio Standard, improvements in energy efficiency through periodic updates to Title 24, AB 1493 (Pavley), and the Low Carbon Fuel Standard (LCFS). Table V.I-5 presents the percent reduction for each measure as estimated by BAAQMD.[27] Tables V.I-6 and V.I-7 present the reduction in GHG emissions from future residential development with implementation of AB 32 reduction measures.

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[27] For example, the Low Carbon Fuel Standard (LCFS) anticipates that a portion of the emissions reductions would occur over the life cycle of the transportation fuel product, rather than from mobile source emissions factors. The emissions reduction accounts only for the GHG reductions anticipated from reduced emissions factors. Similarly, the Renewable Portfolio Standard (RPS) will require the renewable energy portion of the retail electricity portfolio to be 33 percent in 2020. Pacific Gas and Electric's (PG&E) current renewable portfolio is 12 percent, therefore to meet the RPS, PG&E will need to increase their renewable energy by 21 percent (not 33 percent).

Table V.I-5
GHG Emission Reductions from AB 32 Scoping Plan Measures

Category	Affected Emission Sources	Measure	Reduction from 2020 GHG Sector Inventory (%)
Mobile	On-road passenger vehicles	AB 1493 Pavley	19.7%
		LCFS	7.2%
		Passenger Vehicle Efficiency	2.8%
	Heavy/Medium Duty Vehicles	LCFS	7.2%
		Heavy Duty Vehicle Efficiency	2.9%
Area	Natural Gas	Energy Efficiency Measures	9.5%
Indirect	Electricity	RPS	21.0%
		Energy Efficiency Measures	15.7%

Notes: AB = Assembly Bill; LCFS = Low Carbon Fuel Standard; RPS = Renewable Portfolio Standard
Sources: Bay Area Air Quality Management District. California Environmental Quality Act Guidelines Update, Proposed Thresholds of Significance. December 7, 2009. Data compiled by ICF Jones & Stokes

Table V.I-6
Predicted Greenhouse Gas Emissions from Future Residential Development (2020)

Emissions Source	CO_2e Emissions in Metric Tons per Year ($MTCO_2e/yr$)		
	Project without Reduction Measures	Project with Reduction Measures	Reduction Percentage
Construction	3,670	3,670	0%
Natural Gas Consumption	349,572	316,363	9.5%
Electricity Generation	223,790	146,802	34%
Water Consumption	17,378	13,729	21%
Waste Generation	10,687	10,687	0%
Motor Vehicles	4,088,369	3,142,497	23%
Landscape Equipment	39	39	0%
Total Emissions	4,693,505	3,633,786	23%
Population	863,457		
Per Service Population Emissions	***5.44***	***4.21***	

Note: Per service population value is calculated by dividing the total annual construction and operational emissions by future residential population.

Source: Christopher A. Joseph & Associates, May 2010. Calculation data and results provided in GHG Memorandum dated May 28, 2010.

As shown in Table V.I-6, with implementation of state regulations and AB 32 GHG reduction measures, the construction and operational emissions would decrease 23 percent from 4,693,505 MT CO_2e per year to 3,633,786 MT CO_2e per year. On a per service population basis, emissions would be reduced from 5.44 MT CO_2e per year to 4.21 MT CO_2e per year.

Table V.I-7
Predicted Greenhouse Gas Emissions from Future Residential Development (2025)

	CO_2e Emissions in Metric Tons per Year ($MTCO_2e/yr$)		
Emissions Source	**Project without Reduction Measures**	**Project with Reduction Measures**	**Reduction Percentage**
Construction	3,702	3,702	0%
Natural Gas Consumption	360,989	326,695	9.5%
Electricity Generation	231,099	151,597	34%
Water Consumption	17,499	13,824	21%
Waste Generation	11,017	11,017	0%
Motor Vehicles	4,219,837	3,243,641	23%
Landscape Equipment	40	40	0%
Total Emissions	4,844,183	3,750,516	23%
Population	890,129		
Per Service Population Emissions	***5.44***	***4.21***	

Note: Per service population value is calculated by dividing the total annual construction and operational emissions by future residential population.

Source: Christopher A. Joseph & Associates, May 2010. Calculation data and results provided in GHG Memorandum dated May 28, 2010.

As shown in Table V.I-7, with implementation of state regulations and AB 32 GHG reduction measures, the construction and operational emissions would decrease 23 percent from 4,844,183 MT CO_2e per year to 3,750,516 MT CO_2e per year. On a per service population basis, emissions would be reduced from 5.44 MT CO_2e per year to 4.21 MT CO_2e per year.

Reductions from City Measures

Additional reductions in construction and operational GHG emissions associated with operational emissions would be achieved through compliance with City regulations and ordinances. Table V.I-8 presents measures that would further reduce GHG emissions from residential development on a project-by-project basis.

Table V.I-8
Applicable GHG Emission Reductions from City Measures

Regulation	Project Requirement
Bicycle Parking in Residential Buildings (Planning Code, Section 155.5)	For projects up to 50 dwelling units, one Class 1 space is required for every 2 dwelling units. For projects over 50 dwelling units, 25 Class 1 spaces is required plus one Class 1 space is required for every 4 dwelling units over 50.
Car Sharing Requirements (Planning Code, Section 166)	New residential projects or renovation of buildings being converted to residential uses larger than 50 dwelling units within most of the City's mixed-use and transit-oriented residential districts are required to provide car share parking spaces.
San Francisco Green Building Requirements for Energy Efficiency (SF Building Code, Chapter 13C)	Under the Green Point Rated system, all new residential buildings would be required to be at a minimum 15% more energy efficient than Title 24 energy efficiency requirements.
San Francisco Green Building Requirements for Stormwater Management (SF Building Code, Chapter 13C)	Most projects in San Francisco are required to comply with the SFPUC's stormwater design guidelines, which emphasize low impact development using a variety of Best Management Practices for managing stormwater runoff and reducing impervious surfaces, thereby reducing the volume of combined stormwater and sanitary sewage requiring treatment.
San Francisco Green Building Requirements for water reduction (SF Building Code, Chapter 13C)	High-rise residential projects would be required to reduce potable water use for landscaping by 50% and reduce total potable water use by 30% by 2012.
San Francisco Green Building Requirements for solid waste (SF Building Code, Chapter 13C)	Pursuant to Section 1304C.0.4 of the Green Building Ordinance, all new construction, renovation and alterations subject to the ordinance are required to provide recycling, composting and trash storage, collection, and loading that is convenient for all users of the building.
San Francisco Green Building Requirements for construction and demolition debris recycling (SF Building Code, Chapter 13C)	High-rise residential projects proposing demolition are required to divert at least 75% of the project's construction and demolition debris to recycling.
Construction Demolition and Debris Recovery Ordinance (Environment Code, Chapter 14)	Requires that projects proposing demolition divert 65% of their construction & demolition debris from landfills to reuse/recycling. This would apply to small (4 or fewer units) and midsized (5+ units) residential projects.
Street Tree Planting Requirements for New Construction (Planning Code Section 143)	Planning Code Section 143 requires new construction, significant alterations or relocation of buildings within many of San Francisco's zoning districts to plant one 24-inch box tree for every 20 feet along the property street frontage.

San Francisco has been actively pursuing cleaner energy, alternative transportation and solid waste policies, many of which have been codified into regulations as shown above. In an independent review of San Francisco's communitywide emissions it was reported that San Francisco has achieved a 5%

reduction in community-wide GHG emissions below the Kyoto Protocol 1990 baseline levels. The 1997 Kyoto Protocol sets a greenhouse gas reduction target of 7% below 1990 levels by 2012. The "community-wide inventory" includes GHG emissions generated by San Francisco by residents, businesses, and commuters, as well as municipal operations. The inventory also includes emissions from both transportation and building energy sources.[28]

Although future population and subsequent housing construction could increase citywide GHG emissions, new construction would be required to comply with GHG reduction regulations as discussed above, as well as applicable AB 32 Scoping Plan measures that are ultimately adopted and become effective during implementation of individual development projects.

The 2004 and 2009 Housing Element do not propose new construction, rather the housing elements provide direction for how new housing should be constructed. Both the 2004 and 2009 Housing Elements generally seek to accommodate new housing by increasing density and preserving the City's existing housing stock. The 2004 Housing Element primarily does this through policies that promote increased density or housing in neighborhood commercial districts, industrial and downtown areas of the city. The 2009 Housing Element seeks to promote housing near transit, encouraging commercial and institutional uses to include housing in their developments and promotes increased density through community planning processes and zoning accommodations for affordable housing projects. These policies could reduce the amount of GHGs emitted citywide. Other policies that could reduce GHG emissions include policies that promote adaptive reuse of existing buildings, preservation of existing housing units, weatherization of housing units, and green building strategies. The implications for citywide GHG emissions from these policies are discussed below. None of the policies in the 2004 or 2009 Housing Elements would be expected to increase GHG emissions.

2004 Housing Element Analysis

The following 2004 Housing Element policies would be expected to reduce citywide housing-related GHG emissions by increasing density; encouraging housing near jobs, services, and/or transit; preserving housing stock; and encouraging energy efficient practices.

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[28] City and County of San Francisco: Community GHG Inventory Review. August 1, 2008. IFC International, 394 Pacific Avenue, 2nd Floor, San Francisco, CA 94111. Prepared for City and County of San Francisco, Department of the Environment.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served b sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	Policy 5.5: Preserve landmark historic residential buildings.
	Implementation Measure 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	
Promote energy efficient housing development.	Policy 11.10: Include energy efficient features in new residential development and encourage weatherization in existing housing to reduce overall housing costs and the long-range cost of maintenance.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing cost.

The 2004 Housing Element does not contain any policies that would result in substantial increases in the amount of GHGs emitted from new housing construction or from meeting the City's housing goals. Both the 1990 Residence Element and the 2004 Housing Element include policies that would result in reduced GHG emissions by: (1) promoting housing in proximity to job cores, neighborhood services, or along transit routes; (2) promoting increased housing density; (3) promoting infill development; (4) preserving the City's existing housing stock; and (5) encouraging energy efficiency in new development. The effects of these policies with respect to GHG emissions are discussed below.

Housing in Proximity to Job Cores, Neighborhood Services, and Transit

Both the 1990 Residence Element and 2004 Housing Element promote housing in proximity to job cores and neighborhood services. The 2004 Housing Element also emphasizes housing near transit. The 2004 Housing Element includes an additional policy (Policy 1.2), which specifically encourages housing in neighborhood commercial districts. Housing that is provided in the downtown, commercial or industrial areas encourage housing near places of employment, increasing the likelihood that individuals will utilize alternative modes of transportation including bicycling, walking and transit. Any mode shift away from single-occupancy vehicles would reduce the city's overall vehicle miles traveled, reducing the amount of GHGs from vehicle trips. It also follows that housing in proximity to neighborhood services, meaning housing in mixed-use districts or near commercial districts with a variety of neighborhood serving retail, could reduce vehicle trips and promote walking, biking or transit to such destinations. The proximity of neighborhood services to new housing could also reduce vehicle miles traveled (VMT) by providing those services closer to the home. Housing in proximity to transit is another strategy that is used to reduce single occupancy vehicle trips and encourage a portion of the City's trip mode to shift to transit. Altogether, these strategies could reduce the City's overall GHG emissions by encouraging a reduction in vehicle trips and VMT.

Increased Housing Density

Increased housing density is a strategy that is used to reduce VMT and can have added benefits of reduced energy consumption. A considerable amount of research has been conducted on the links between residential density and travel behavior; studies have shown that a doubling of residential density could lower auto ownership and VMT by 16%.[29] A reduction in VMT translates to an overall GHG reduction from less vehicle emissions and energy savings from avoided gasoline consumption. 2004 Housing Element policy 11.7, not included in the 1990 Residence Element, would seek to reduce or remove minimum parking requirements for housing, increasing the amount of lot area available for housing units, incrementally increasing the density of the site.

Infill Development

In general terms, infill development describes the use of land within a built up area. In San Francisco, opportunities for infill development are generally characterized as having a combination of higher density, and/or efficient location in terms of proximity to job cores, neighborhood services, and/or transit services. As discussed above, these features (density and proximity to other uses) could result in GHG reductions from reduced vehicle trips and VMT.

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[29] Holtzclaw, 2004. Oral Presentation: Location Efficiency as the Missing Piece of the Energy Puzzle: How Smart Growth Can Unlock Trillion Dollar Consumer Cost Savings. Presented at the 2004 ACEEE Summer Study on Energy Efficiency in Buildings, Asilomar, California. Available online at: www.nrdc.org.

Preservation of Existing Housing Stock

Reuse of existing buildings (also termed adaptive reuse) and preservation of existing buildings also have added GHG benefits. Preservation of existing buildings reduces the need for construction of new housing units, as units are maintained and therefore have less opportunity to become dilapidated, abandoned, or unsafe. The ability of the City to maintain its existing housing stock through maintenance and reuse of existing buildings preserves the embodied energy of these buildings. Embodied energy refers to the sum total of the energy necessary for a product's lifecycle. This lifecycle includes raw material extraction, transportation, manufacture, assembly, installation, disassembly, deconstruction and/or decomposition. Each building material has embodied energy, therefore the degree to which the embodied energy of an existing building or housing unit can be preserved, maintained, or reused is directly related to a reduced need for new building materials and the associated GHG emissions.

Energy Efficiency

As discussed previously, residential uses emit GHG emissions from natural gas required for heating and electricity. Electricity emissions are indirect emissions that are generated from power plants, while natural gas emissions are direct emissions. Increased energy efficiency translates into reduced energy consumption and reduced GHG emissions.

As shown above, both the 1990 Residence Element and the 2004 Housing Element include policies that would ultimately result in reduced GHG emissions by encouraging: (1) housing in proximity to job cores, neighborhood services, and/or transit; (2) increased housing density; (3) infill development; (4) preservation of existing housing stock; and (5) energy efficiency. The 2004 Housing Element includes at least two additional policies not included in the 1990 Residence Element (Policies 1.2 and 11.7). Policy 1.2 further encourages housing in proximity to neighborhood services, and Policy 11.7 encourages increased density by removing parking requirements and increasing the amount of lot area available for residential use.

AB 32 contains a comprehensive approach for developing regulations to reduce statewide GHG emissions. ARB acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas sectors. Many of the measures in the Scoping Plan—such as implementation of increased fuel efficiency for vehicles (the "Pavley" standards), increased efficiency in utility operations, and development of more renewable energy sources—require statewide action by government, industry, or both. The City has already implemented several of these measures that require local government action, such as a Green Building Ordinance, a Zero Waste strategy, a Construction and Demolition Debris Recovery Ordinance, and a solar energy generation subsidy program, to realize meaningful reductions in GHG emissions. These programs (and including others not listed) collectively comprise San Francisco's GHG reduction strategy and continue San Francisco's efforts to reduce the City's GHG emissions to 20 percent below 1990 levels by the year 2012, a goal outlined in the City's 2004 Climate Action Plan. The City's GHG reduction strategy also furthers the State's efforts to reduce statewide GHG emissions as mandated by AB 32.

Given that the 2004 Housing Element does not contain any policies that would result in substantial increases in the amount of GHGs emitted from new housing construction or from meeting the City's housing goals and that the 2004 Housing Element contains policies which may further reduce citywide GHG emissions, the 2004 Housing Element would not result in GHG emissions that would have a significant effect on the environment, nor would the 2004 Housing Element conflict AB 32 or the City's GHG reduction strategy. Therefore, the contribution of potential GHG impacts from the 2004 Housing Element would not be cumulatively considerable. As such, the 2004 Housing Element's cumulative GHG impacts would be ***less than significant***.

2009 Housing Element Analysis

The following 2009 Housing Element policies would be expected to reduce citywide housing-related GHG emissions by directing growth to certain areas of the City, promoting increased density standards, promoting the preservation of residential buildings, and promoting energy-efficient housing development.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.
Promote preservation of residential buildings.	Policy 2.3: Prevent the destruction or reduction of housing for parking.	
	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.
Promote energy efficient housing development.	Policy 12.3: Ensure new housing is sustainably supported by the City's infrastructure systems.	
	Policy 13.4: Promote the highest feasible level of "green" development in both private and municipally-supported housing.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, both the 1990 Residence Element and the 2009 Housing Element include policies that would ultimately result in reduced GHG emissions. The 2009 Housing Element and 1990 Residence Element policies seek to provide housing: (1) in proximity to job cores, neighborhood services, and/or transit; (2) by increasing housing density; (3) by encouraging infill development; (4) through preservation of the existing housing stock or adaptive reuse of existing buildings; and (5) promoting energy efficiency. As previously discussed, each of these strategies could result in GHG emissions reductions. The 2009 Housing Element includes a number of additional policies that speak to housing in proximity to job cores, neighborhood services and along transit. However, the 1990 Residence Element contains additional policies that promote increased density more generally throughout the City, while the 2009 Housing Element includes increased density as a strategy to pursue during community planning processes and for affordable housing projects. Both the 1990 Residence Element and 2009 Housing Element include policies that promote infill development, preservation the City's existing housing stock, and energy efficient development.

Given that the 2009 Housing Element does not contain any policies that would result in substantial increases in the amount of GHGs emitted from new housing construction or from meeting the City's housing goals and that the 2009 Housing Element contains additional policies which may further reduce citywide GHG emissions, the 2009 Housing Element would not result in GHG emissions that would have a significant effect on the environment, nor would the 2009 Housing Element conflict AB 32 or the City's GHG reduction strategy. Therefore, the contribution of potential GHG impacts from the 2009 Housing Element would not be cumulatively considerable. As such, the 2009 Housing Element's cumulative GHG impacts would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

DISCUSSION OF RECENTLY ADOPTED BAAQMD CEQA THRESHOLDS

As discussed previously, BAAQMD recently adopted updated air quality CEQA thresholds of significance, including significance thresholds for GHG emissions. BAAQMD adopted two sets of GHG thresholds: one that would apply to specific development projects, and another threshold that would apply to plan-level CEQA analyses. The proposed 2004 and 2009 Housing Elements are an update to the City's General Plan and therefore, the plan-level threshold would be the applicable threshold for the proposed Housing Elements. However, as discussed in Section V.H (Air Quality), according to the BAAQMD, the recently adopted thresholds of significance for GHGs are intended to apply to environmental analyses that have begun on or after adoption of the revised CEQA thresholds (June 2, 2010). Therefore, the proposed project would not be subject to BAAQMD's recently adopted thresholds of significance. However, in anticipation of BAAQMD adopting revised thresholds of significance, an analysis of the proposed project's impact with respect to the recently adopted CEQA significance thresholds was performed. The BAAQMD plan-level GHG thresholds include the following two CEQA significance thresholds:

- Consistency with a "Qualified GHG Reduction Strategy"; or
- An efficiency metric of 6.6 MT CO_2e per service population [residents + employees] (SP) per year by 2020.[30]

With regards to the Qualified GHG Reduction Strategy, the City's 2004 Climate Action Plan identifies a strategy to reduce San Francisco's GHG emissions by 20 percent below 1990 levels by 2012. This plan includes an emissions inventory, a forecast of projected emissions, a reduction target, actions needed to meet the reduction target and an implementation strategy. Many of the GHG reduction actions proposed in the Climate Action Plan have been codified into City regulations. Table V.I-8 lists GHG reduction regulations that could apply to new residential development. As discussed previously, the proposed 2004 and 2009 Housing Elements do not include any policies that would result in substantial increases in the amount of GHGs emitted from new housing construction or from meeting the City's housing goals. In fact, many policies would result in GHG reductions. Therefore, the proposed 2004 and 2009 Housing elements would further the City's GHG reduction goals and would not be inconsistent with the City's Climate Action Plan.

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[30] Bay Area Air Quality Management District. California Environmental Quality Act Air Quality Guidelines. May 2010. This document is available online at: www.baaqmd.gov. Accessed June 15, 2010.

Although the 2004 and 2009 Housing Elements would not result in new residential construction, ABAG projects that the City's housing stock and population will increase between 2009 and 2025. A GHG analysis was prepared to determine the amount of GHGs that could be emitted from future residential development in the years 2020 and 2025. This analysis determined that future 2020 and 2025 residential development would result in approximately 5.44 $MTCO_2e$/SP/year. Implementation of AB 32 GHG reduction measures would reduce 2020 and 2025 emissions to 4.21 $MTCO_2e$/SP/year, and compliance with the City's regulations would further reduce GHGs from future development. These estimates show that GHG emissions from future development would be less than BAAQMD's proposed efficiency metric threshold of 6.6 MT CO_2e/SP/year. Therefore, future residential growth in the City would not result in cumulatively considerable GHG impacts, and the proposed 2004 and 2009 Housing Elements' contribution to cumulative GHG impacts would continue to be ***less than significant***.

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V. ENVIRONMENTAL SETTING AND IMPACTS
J. WIND AND SHADOW

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to wind and shadow. The San Francisco Planning Code contains provisions pertaining to wind and shadow minimization. Because wind and shadow contribute substantially to the San Francisco environment and can be highly susceptible to an impact from development, these issues are analyzed as part of CEQA review in San Francisco.

ENVIRONMENTAL SETTING

Wind

Wind impacts are generally caused by large building masses extending substantially above neighboring buildings, and by buildings oriented such that a new large wall catches a prevailing wind, particularly if such a wall includes little or no articulation.

Long-term wind data in San Francisco is available from historical wind records from the U.S. Weather Bureau weather station located above the old Federal Building at 50 United Nations Plaza. Table V.J-1 shows that average wind speeds are greatest in the summer and least in the fall. Winds also exhibit a diurnal variation with the strongest winds occurring in the afternoon, and lightest winds occurring in the early morning.

Table V.J-1
Seasonal Wind Direction Frequency and Average Speed in Knots (%)

Prevailing Wind Direction	January		April		July		October		Annual	
	Freq	Speed	Freq	Speed	Freq	Speed	Freq	Speed	Freq	Speed
North	12.5	7.9	2.2	11.0	0.3	6.0	3.3	6.6	5.0	7.2
North-northeast	1.3	5.6	0.7	6.1	0.3	6.8	0.7	6.6	0.8	6.0
Northeast	4.5	5.3	1.3	4.7	1.1	7.4	2.2	5.8	1.9	5.6
East-northeast	1.4	6.3	0.6	4.8	0.2	5.1	0.8	5.1	0.8	5.6
East	11.9	4.8	2.6	4.5	0.1	3.9	4.8	4.5	4.8	5.0
East-southeast	2.1	6.4	0.3	5.2	0.1	2.5	0.6	5.8	0.8	5.8
Southeast	9.1	6.4	2.4	7.8	0.2	5.0	3.7	6.6	4.2	6.8
South-southeast	2.8	5.6	0.3	3.8	0.1	3.0	1.3	9.0	1.2	6.4
South	6.7	5.0	4.2	7.1	1.1	4.9	4.5	7.5	4.1	6.4
South-southwest	1.0	4.8	0.4	4.1	0.1	3.0	1.7	12.8	0.9	8.6
Southwest	4.5	8.0	7.7	9.2	15.6	10.1	7.8	9.1	9.3	9.3
West-southwest	1.0	5.9	1.7	7.7	1.2	8.1	2.8	8.8	2.4	8.6
West	13.2	7.2	43.0	10.9	53.0	13.1	34.6	9.1	35.7	10.9
West-northwest	7.5	11.1	20.7	14.1	14.9	14.5	15.2	10.9	13.8	12.7
Northwest	11.5	7.7	9.3	10.7	10.7	11.4	10.8	8.5	10.0	9.7
North-northwest	1.2	5.7	0.6	10.8	0.6	8.5	0.5	7.5	0.7	8.3
Calm[1]	7.7	-	2.1	-	0.3	-	4.6	-	3.7	-

Table V.J-1
Seasonal Wind Direction Frequency and Average Speed in Knots (%)

Prevailing Wind Direction	January		April		July		October		Annual	
	Freq	Speed	Freq	Speed	Freq	Speed	Freq	Speed	Freq	Speed
TOTAL	100.0		100.0		100.0	100.0	100.0	100.0	100.0	100.0

[1] The calm category represents the percent of time during the month when wind conditions are calm and no prevailing wind direction is discernable.

Source: Market and Octavia Neighborhood Plan, Final EIR, Adopted September 2007, at page 4-142. Original Source: U.S. Weather Bureau data collected at the U.S. Weather Bureau station above the old Federal Building in United Nations Plaza; Donald Ballanti, 2004.

Winds in the City occur most frequently from the west to northwest directions, reflecting the persistence of sea breezes. Wind direction is most variable in the winter.[1] The approach of winter storms often results in southerly winds. Although not as frequent as westerly winds, these southerly winds are often strong. The strongest winds in the City are typically from the south during the approach of a winter storm.

Winds vary at pedestrian levels within a city. In San Francisco wind strength is generally greater, on average, along streets that run east-west as buildings tend to channel westerly winds along these streets.[2] Streets running north-south tend to have lighter winds, on average, due to the shelter offered by buildings on the west side of the street. Within the City, the streets systems north of Market Street and portions of the systems south of Market Street (including those in the Mission District, Potrero Hill, Mission Bay, and Central Waterfront) are mainly on a north/south and east/west grid. However, portions of the street systems south of Market Street (including those in South of Market, South Beach, Bayview Hunters Point, and Visitacion Valley) are mainly northwest/southeast and southwest/northeast, which results in a less predictable pattern of wind variation at the pedestrian level.

The Planning Department evaluates potential wind impacts on a project-level basis. The Planning Department generally refers to the wind hazard criterion (discussed further below under Regulatory Setting) to determine the significance for CEQA purposes and to evaluate wind effects of new development in all areas of the City. Any new building or addition that would cause wind speeds to exceed the hazard level of 26-mph-equivalent wind speed (as defined in the Planning Code) more than one hour of any year must be modified and is subject to the relevant wind hazard criterion.[3] Buildings below 85 feet generally do not have the potential to affect wind speeds. Buildings that extend in height above surrounding development have more impact than those of similar height to surroundings. Figure IV-4 is a generalized Citywide Height Map that shows the locations where allowable heights could exceed 85 feet.

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[1] Market and Octavia Neighborhood Plan, Final EIR, Adopted September 2007, at page 4-141.

[2] Id.

[3] "Equivalent wind speed" is defined as an hourly mean wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians. San Francisco Planning Code Section 148(b).

Shadow

Shading is an important environmental issue because the users or occupants of certain land uses, such as residential, recreational/parks, churches, schools, outdoor restaurants, and pedestrian areas have some reasonable expectations for direct sunlight and warmth from the sun. These land uses are termed "shadow-sensitive". For a discussion of parks and open space in San Francisco, refer to Section V.K (Recreation).

Shadow lengths are dependent on the height and size of the building or object from which they are cast and the angle of the sun. The angle of the sun varies with respect to the rotation of the earth (i.e., time of day) and elliptical orbit (i.e., change in seasons). The longest shadows are cast during the winter months and the shortest shadows are cast during the summer months.

In the City, the presence of the sun's warming rays is essential to enjoying open space. This is because climatic factors, including ambient temperature, humidity, and wind, often combine to create a comfortable climate only when direct sunlight is present. Therefore, the shadows created by new development nearby can critically diminish the utility of the open space. This is particularly a problem in the Downtown area and in adjacent neighborhoods, where there is a limited amount of open space, pressure for new development, and zoning controls that allow tall buildings. Neighborhoods that experience shading issues include the Downtown area and many of the adjacent areas, including Civic Center, Nob Hill, Financial District, Mission Bay, and South of Market. Together these areas could accommodate approximately 12 percent of the City's pipeline housing units and approximately five percent of the overall capacity for new housing within the City.[4] Refer to Figure IV-4 in Section IV. Project Description, which shows the Citywide Height Map.

The City of San Francisco is densely developed with urban uses. As discussed in Section V.K (Recreation), the City is served by over 200 neighborhood park, recreation, and open space facilities. These facilities are considered "shadow-sensitive".

In general, all applications for new construction or additions to existing buildings above 40 feet in height must be reviewed to determine whether a project would cast additional shadows on properties under the jurisdiction of, or designated to be acquired by the Recreation and Park Department. The Planning Department staff develops a "shadow fan" diagram that shows the maximum extent of the shadows cast by a proposed building throughout the year, between one hour after sunrise and one hour before sunset. If the shadow fan indicates a project shadow does not reach any property protected by Planning Code Section 295 (the sunlight ordinance), no further review is required. If the shadow fan shows that a project has potential to shade such properties, further analysis is required.

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[4] This calculation used the entire Downtown District to represent the Civic Center, Nob Hill, and Financial District areas. The aforementioned areas do not encompass the entire Downtown District. Therefore, the percentage of pipeline housing units and overall capacity that are in areas with shading issues are likely overstated.

REGULATORY SETTING

Federal / State

No federal or state regulations related to wind and shadow are applicable to the proposed Housing Elements.

Local

San Francisco General Plan

As part of the City's goal to create and preserve high-quality public open spaces, the Recreation and Open Space Element of the General Plan includes a policy to preserve sunlight in public open spaces, particularly in downtown districts and in neighborhoods immediately adjacent to the downtown core, where there is a limited amount of open space, where there is pressure for new development, and where zoning controls allow tall buildings. But the problem of new shadow potentially exists wherever tall buildings near open space are permitted.

San Francisco Planning Code

The San Francisco Planning Code contains a number of provisions to reduce wind currents in the City and ensure sunlight in parks and on sidewalks.

Wind

Section 148

Planning Code Section 148 establishes two comfort criteria and one hazard criterion for assessing wind impacts of projects in San Francisco. The comfort criteria are based on pedestrian-level wind speeds that include the effects of turbulence and are known as "equivalent wind speeds." Section 148 of the Planning Code establishes an equivalent wind speed of seven miles per hour (mph) for seating areas and 11 mph for areas of substantial pedestrian use. New buildings and additions to buildings may not cause ground-level winds to exceed these levels more than 10 percent of the time year round between 7:00 AM and 6:00 PM. If existing wind speeds exceed the comfort level, new buildings and additions in these areas must be designed to reduce ambient wind speeds to meet the requirements. Section 148 and Section 249 (c)(9) also establish a hazard criterion, which is an equivalent wind speed of 26 mph for a single full hour, not to be exceeded more than once during the year. New buildings in governed areas cannot exceed this standard.

To provide a comfortable wind environment for people in San Francisco, development projects would be subject to specific comfort criteria. The Planning Code specifically outlines these criteria for areas that typically experience wind exceedances, specifically the Downtown Commercial (C-3) District and each of the following special use districts: Folsom and Main, Van Ness Avenue, and South of Market [Sections 249.1(b)(2), 243(c)(9), 263.11(c)]. These criteria are shown in Table V.J-2.

Table V.J-2
San Francisco Planning Code Wind Criteria for Specific Areas

Special Use District	Section	Requirement
Folsom and Main Residential/Commercial Special Use District	249.1(b)(2)	New buildings and additions to existing buildings shall be shaped, or other wind-baffling measures shall be adopted, so that the developments will not cause ground-level wind currents to exceed, more than 10 percent of the time year-round, between 7:00 a.m. and 6:00 p.m., the comfort level of 11 m.p.h. equivalent wind speed in areas of substantial pedestrian use and seven m.p.h. equivalent wind speed in public seating areas. The term "equivalent wind speed" shall mean an hourly mean wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.
Van Ness Special Use District	243(c)(9)	(A) New buildings and additions to existing buildings shall be shaped, or other wind baffling measures shall be adopted, so that the development will not cause year-round ground level wind currents to exceed, more than 10 percent of the time, between 7:00 a.m. and 6:00 p.m., the comfort level of 11 m.p.h. equivalent wind speed in areas of pedestrian use and seven m.p.h. equivalent wind speed in public seating areas. When pre-existing ambient wind speeds exceed the comfort levels specified above, the building shall be designed to reduce the ambient wind speeds in efforts to meet the goals of this requirement. (B) An exception to this requirement may be permitted but only if and to the extent that the project sponsor demonstrates that the building or addition cannot be shaped or wind baffling measures cannot be adopted without unduly restricting the development potential of the building site in question. (i) The exception may permit the building or addition to increase the time that the comfort level is exceeded, but only to the extent necessary to avoid undue restriction of the development potential of the site. (ii) Notwithstanding the above, no exception shall be allowed and no building or addition shall be permitted that causes equivalent wind speeds to reach or exceed the hazard level of 26 m.p.h. for a single hour of the year. (C) For the purposes of this Section, the term "equivalent wind speed" shall mean an hourly wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.
South of Market RSD 40-X/85-B Height District	263.11(c)	New buildings or additions subject to this Section shall be shaped, or other wind baffling measures shall be adopted, so that the development will not cause ground level wind currents to exceed, more than 10 percent of the time year-round, between 7:00 a.m. and 6:00 p.m., the comfort level of 11 m.p.h. equivalent wind speed in areas of substantial pedestrian use and seven m.p.h. equivalent wind speed in public seating areas. When pre-existing ambient wind speeds exceed the comfort level, the building or addition shall be designed to reduce the ambient wind speeds to meet the requirements.

Shade/Shadow

Section 146(a)

Planning Code Section 146(a) includes sunlight access criteria to allow direct sunlight to reach sidewalk areas of designated streets during critical hours of the day. In the case of sidewalks, the critical hours are considered to be the hours around noon. The Code designates 18 streets within the project area (all near the Downtown) as subject to Section 146(a). Individual new development projects within the project site must comply with Section 146(a) requirements, or obtain an allowable exception under Section 309 of the Planning Code.

Section 146(c)

Planning Code Section 146(c) includes sunlight access criteria to reduce substantial shadow impacts on public sidewalks in the C-3 Districts other than those protected by Section 146(a). New buildings and additions to existing structures must minimize any substantial shadow impacts in the C-3 (Downtown) Districts not protected under Subsection (a), as long as this can be accomplished without the creation of unattractive building design and the undue restriction of development potential.

Section 147

Planning Code Section 147 states that new buildings and additions to existing buildings in C-3, South of Market Mixed Use, and Eastern Neighborhoods Mixed Use Districts where the building height exceeds 50 feet shall be shaped, consistent with the dictates of good design and without unduly restricting the development potential of the site in question, to reduce substantial shadow impacts on public plazas and other publicly accessible spaces other than those protected under Section 295.

Section 295

Section 295 of the Planning Code, the Sunlight Ordinance, was adopted through voter approval of Proposition K in November 1994 to protect certain public open spaces from shadowing by new structures. Section 295 prohibits the issuance of building permits for structures or additions to structures greater than 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset on any day of the year. An exception is permitted if both the Planning and Recreation and Park Commissions determine that the shadow would have an insignificant impact on the use of such property. All of the open spaces in the City under Recreation and Park Department control are now protected by the Section 295. Private open spaces that are required under the Planning Code as part of an individual development proposal are not protected by Section 295.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Alter wind in a manner that substantially affects public areas; or
- Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the Regional Housing Needs Allocation (RHNA) as determined by the Association of Bay Area Governments (ABAG). Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how and where new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

Impact WS-1: The proposed Housing Elements would not alter wind in a manner that substantially affects public areas. (Less than Significant)

New construction could result in wind impacts if new housing would be constructed in a manner that would increase ground-level wind speeds. Typically, new development greater than 85 feet in height could potentially affect ground level wind speeds. Buildings that would result in wind speeds that exceed the hazard criterion of 26 miles per hour (mph) for one hour of the year would result in a significant wind impact.

2004 Housing Element Analysis

The following 2004 Housing Element policies could result in the exposure of people to wind impacts by encouraging new development to build to maximum allowable height and bulk, potentially increasing building height and mass, thereby altering ground-level wind speeds.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only in cases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 2004 Housing Element also encourages new housing through on-going and future community planning processes (Policies 1.1, 11.6 and Implementation Measures 1.3.1, 1.3.2, 1.6.2, and 2.4.2) and on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4). The 1990 Residence Element similarly directs growth to commercial and industrial areas, neighborhood commercial districts, the Downtown and on infill development sites, although to a lesser degree than the 2004 Housing Element. The 2004 Housing Element also advocates for housing in community plan areas and along transit corridors, both of which are policies that were not included in the 1990 Residence Element. Policies that direct growth to certain areas of the City could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass, and altering ground-level wind speeds.

The 2004 Housing Element promotes increased building densities more so than the 1990 Residence Element. The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk limits, potentially increasing building height and mass, and altering ground-level wind speeds.

2004 Housing Element Policy 11.6 and 11.8 could encourage project sponsors to build to maximum building heights allowed by the Planning Code. 2004 Housing Element Policy 11.8 advocates for community planning processes to accommodate growth. Some strategies that could be considered may include increasing height limits. While the planning process itself would not have direct effects related to wind, specific development criteria proposed through such a process could affect wind patterns. The effects of development or increased height limits on ground level wind speeds are development-specific. A determination of wind impacts would be made at a project level, based on an analysis of ground-level wind currents, as specific development proposals or proposals to change allowable height and bulk are made. For instance, at the project level, project proponents could be required to utilize building forms that would minimize the creation of surface winds near the base of buildings.

Ground-level wind accelerations are controlled by exposure (a measure of the extent that the building extends above surrounding structures into the wind stream), massing (slab-shaped buildings have greater potential for wind acceleration effects than do buildings with unusual shapes, round faces, or where accompanied by appropriate setbacks), and orientation. These factors would be evaluated on a project-by-project basis. 2004 Housing Element Policy 11.8 encourages full buildout of projects to the maximum allowable building envelope. While this does not change allowable heights, the encouragement of full-buildout could encourage buildings to be constructed to the maximum allowable building height. Similar to 2004 Housing Element Policy 11.6, this policy could potentially impact wind speeds in areas of the city that experience wind exceedances. However, as with 2004 Housing Element Policy 11.6, individual projects would be subject to review regarding wind impacts as well as subject to applicable Planning Code requirements that mitigate wind impacts.

Regarding 2004 Housing Element Implementation Measure 1.6.2, increased height limits and elimination of density requirements have been studied as part of the Transbay/Rincon Hill Area Plan. The Transbay/Rincon Hill Area Plan EIR concluded that full-buildout development in the plan area could result in wind impacts related to pedestrian-comfort criterion at nine public locations in the area. One of these locations could also experience wind hazard criterion exceedances. However, the Transbay/Rincon Hill Area Plan EIR concluded that during the environmental review process for individual projects, potential wind effects would be considered, including through wind tunnel testing, and if wind hazard exceedances occurred, design modifications or other project-tailored mitigation measures would be required, such as articulation of building sides and softening of sharp building edges, to mitigate or eliminate these exceedances.

The Mid-Market redevelopment area has been studied in an EIR as well. Several buildings over 100 feet in height could be planned in the Mid-Market planning area, which contains some of the most windy locations in the City. Within and near the Mid-Market planning area, wind speed has been found to be at times unpleasant and even hazardous. As with the Transbay/Rincon Hill Area Plan, the Mid-Market EIR noted that wind evaluation would be required as part of building design and review for specific projects and projects would not be approved without mitigation for hazardous wind effects. The Mid-Market Plan is currently on hold.

While, the 2004 Housing Element encourages projects to be developed to their maximum height and bulk allowances and, in certain areas, encourages greater height limits, a key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. The following 2004 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the amount of new housing required to meet the City's housing needs and subsequent wind-related impacts resulting from development at maximum allowable height and bulk limits, potentially increasing building height and mass.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	Policy 5.5: Preserve landmark historic residential buildings.
	Implementation Measure 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	

As shown above, the 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.1, 3.3, and 3.6) to a degree similar to the 1990 Residence Element, which could reduce the amount of new housing required to meet the City's housing needs. The preservation of existing housing retains reduces the need for new development to maximum allowable height and bulk limits, thus altering ground-level wind speed impacts. The 2004 Housing Element would not in and of itself result in the construction of substantially taller buildings. The required environmental review for any changes in land use controls would analyze potential impacts to ground-level wind speeds. Furthermore, wind impacts are project-specific and individual projects would be subject to the Planning Department's procedures requiring modification of any new building or addition that exceeds the wind hazard criterion. New residential development would be required to comply with the previously discussed regulations, including Sections 147, 148, 243(c)(9), 249.1(b)(2), and 263.11(c) of the San Francisco Planning Code. Therefore, the 2004 Housing Element would have a

less than significant impact with respect to the alteration of wind patterns that could exceed the City's hazard criterion.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

The following 2009 Housing Element policies could result in the exposure of people to wind impacts by encouraging new development to maximum allowable height and bulk limits, potentially increasing building height and mass and thereby altering ground-level wind speeds.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunters Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure (Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80), thereby directing housing to commercial areas. As discussed previously, directing new housing to certain areas of the City could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass, and altering ground-level wind speeds.

The 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). Overall, the 2009 Housing Element does not promote increased density more so than the 1990 Residence Element. While the 2009 Housing Element contains a policy that advocates for family-sized housing units (Policy 4.1 and Implementation Measure 32), overall density increases from such policy would be speculative as less units would be accommodated within a given building envelope. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk, potentially increasing building height and mass, altering ground-level wind speeds.

Similar to the 2004 Housing Element, major themes of the 2009 Housing Element include the preservation and maintenance of existing housing. The following 2009 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the amount of new housing required to meet the City's housing needs and subsequent wind-related impacts resulting from development at maximum allowable height and bulk limits, potentially increasing building height and mass.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.3: Prevent the destruction or reduction of housing for parking.	
	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3) to a degree similar to the 1990 Residence Element. The maintenance and preservation of existing housing would help to preserve the existing housing stock, requiring less new development to meet housing goals, thereby resulting in less development at maximum allowable height and bulk limits. 2009 Housing Element Policy 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3 are essentially the same as their corresponding 1990 Residence Element policies. 2009 Housing Element Policy 13.4 expands upon 1990 Residence Element Policy 7.5 by promoting the preservation of existing buildings. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Some of the changes to the land use controls that could be explored through community planning processes include increasing height limits. Therefore, the 2009 Housing Element could encourage changes to allowable heights more so than the 1990 Residence Element. As with the 2004 Housing Element, the 2009 Housing Element would not in and of itself result in the construction of substantially taller buildings. Furthermore, wind impacts are project-specific and individual projects would be subject to the Planning Department's procedures requiring modification of any new building or addition that is exceeds the wind hazard criterion. New residential development would be required to comply with the previously discussed regulations, including Sections 147, 148, 243(c)(9), 249.1(b)(2), and 263.11(c) of the San Francisco Planning Code. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the alteration of wind patterns.

Impact WS-2: The proposed Housing Elements would not create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas. (Less than Significant)

New construction could result in impacts related to shadow if new housing would increase shadows on nearby open spaces and parks. Figure V.K-1 in Section V.K (Recreation) identifies open spaces, including community gardens, in the City. As shown, a majority of the City's open spaces are located in the western half of the City, with the exception of (but not limited to) McLaren Park in the South Central neighborhood, Bayview Park in the Candlestick neighborhood, and community gardens located throughout the eastern portion of the City. The proposed Housing Elements could encourage housing on vacant or underutilized sites, which currently do not contribute to existing shadow impacts on adjacent or nearby open space. The City's potential for new residential development is greatest in the following neighborhoods: Western Addition, Market Octavia, Bayview Hunters Point, Mission, Downtown, and South Central, each of which have capacity for over 3,000 housing units.

2004 Housing Element Analysis

As discussed under Impact WS-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. (See 2004 Housing Element Policies 1.1, 1.6, 1.7, 1.8, 4.4, 4.5, 11.6, 11.7, 11.8, 11.9 and Implementation Measures 1.1.1, 1.3.1, 1.6.2, 1.8.1, 1.8.3, 4.4.1, 11.6.1 and 11.7.1.) Directing growth to certain areas of the City and increased density could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass. New construction could result in shadow impacts if a new building is proposed in proximity to an open space and if the building would cast a shadow on the open space that would substantially affect the use of that open space.

The extent of shadow impacts would depend on the height of a building; taller buildings have a greater effect on open spaces by casting longer shadows. Therefore, because shadow impact varies with building height, it is not possible to determine a boundary beyond which a park would not be impacted by building shadows. Promoting development to full build out could result in taller buildings, but those buildings would be allowed under the existing height limits and so could occur regardless of the 2004 Housing Element Policies. The potential for new development to affect public open spaces is appropriately addressed at the project-level, where the development proposal, site characteristics, and proximity to public open spaces are taken into account when determining the effects of shadow on public open spaces. Because the 2004 Housing Element does not propose increased height limits in any areas, the effect of shadows would be less than significant. Although promoting full build out to maximum allowable height limits could incrementally increase actual building heights, new construction would be allowed to build to those heights regardless of the 2004 Housing Element.

A key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. The 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.1, 3.3, and 3.6) to a degree similar to the 1990 Residence Element. The preservation of existing housing reduces the need for new development to maximum allowable height and bulk limits. All applications for new construction or additions to existing buildings above 40 feet in height are reviewed by the Planning Department to determine whether such shading might occur. If a project would result in new shadow, that shadow is evaluated for significance under CEQA. New residential development would be required comply with the previously discussed regulations, including Sections 146(a), 146(c), and 295 of the San Francisco Planning Code. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the creation of new shadows.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

As discussed under Impact WS-1, 2009 Housing Element Policies 2.1, 7.5, and 1.4 could promote development to the maximum building envelope, potentially resulting in greater building heights by directing growth to certain areas of the City and promoting increased density standards. New construction could result in shadow impacts if a new building is proposed in proximity to an open space and if the building would cast a shadow on the open space that would substantially affect the use of that open space.

The extent of shadow impact would depend on the height of a building; taller buildings could have a greater effect on open spaces by casting longer shadows.

The 2009 Housing Element also contains policies 2.3, 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3, which could reduce the 2004 Housing Element's effects on the potential for new development at maximum allowable height and bulk limits by promoting the maintenance of existing housing and discouraging demolition of the existing housing stock, thereby avoiding the potential shadow impacts that could be generated. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Therefore, because shadow impact varies with building height, it is not possible to determine a boundary beyond which a park would not be impacted by building shadows. Promoting development to full build out could result in taller buildings, but those buildings would be allowed under the existing height limits and so could occur regardless of the 2009 Housing Element Policies. The potential for new development to affect public open spaces is appropriately addressed at the project level, where the development proposal, site characteristics, and proximity to public open spaces can be taken into account. These factors can determine whether the shadow substantially affects the use of an open space.

Because the 2009 Housing Element does not propose increased height limits in any areas, the effect of shadows would be less than significant. Although promoting full buildout could incrementally increase actual building heights, new construction would be allowed to build to those heights regardless of the 2009 Housing Element. All applications for new construction or additions to existing buildings above 40 feet in height are reviewed by the Planning Department to determine whether such shading might occur. If a project would result in a new shadow, that shadow is evaluated for significance under CEQA. Furthermore, new residential development would be required to comply with the previously discussed regulations, including Sections 146(a), 146(c), and 295 of the San Francisco Planning Code. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the creation of new shadows.

Cumulative Impacts

The geographic context for cumulative wind and shadow impacts is limited to the area immediately surrounding a specific project. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the project area or immediately adjacent to its project boundaries resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to wind and shadow. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing Elements. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, the planning codes, and other applicable land use plans that are intended to reduce impacts related to wind and shadow. The 2004 Housing Element and 2009 Housing Element policies would not directly or indirectly affect wind and shadow in the cumulative context. New development could affect such resources, but would be evaluated on a project-by-project basis. The 2004 Housing Element and 2009 Housing Element are public policy documents and would not result in direct significant impacts.

Changes to the existing wind and shadow environment in the area could occur through a shift from lower building heights to higher building heights either from height limit changes or from more intensive development of sites under existing height limits. However, it is assumed that future development would be consistent with the adopted General Plan as well as Planning Code requirements. New development is anticipated to undergo CEQA review and apply appropriate mitigation requirements, and undergo design review within the Planning Department. For this reason, cumulative impacts on wind and shadow would be ***less than significant***. The contribution of the Housing Elements to cumulative wind and shadow impacts is ***less than significant*** and is thus not cumulatively considerable.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

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V. ENVIRONMENTAL SETTING AND IMPACTS
K. RECREATION

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to parks and recreational facilities as well as other existing recreational resources.

ENVIRONMENTAL SETTING

For purposes of this analysis, parks are generally defined as areas of land set aside for various recreational opportunities for the public. Recreational facilities are those structures and/or improvements that are built at parks (e.g., benches, picnic tables, tennis courts, etc.). Open space areas are typically unimproved parkland. Therefore, parks and recreational facilities are typically used interchangeably, whereas open space areas refer to those areas where the land is either kept in its natural state or enhanced in order to return the land to its natural state. However, when calculating the City's overall park acreage, open space areas are considered part of the overall total. Open space, while not a part of this analysis, can also be used when referring to the requirements specified in the City's Planning Code with regard to outdoor areas required in residential development.

Regional

Regional recreational facilities are provided by the East Bay Regional Park District in Alameda and Contra Costa counties; the National Park System in Marin, San Francisco, and San Mateo counties; and several State Park recreation facilities located throughout the Bay Area. In addition, thousands of acres of watershed and agricultural lands are preserved as open spaces by water and utility districts or in private ownership. The Bay Trail is a planned recreational corridor that, when complete, will encircle San Francisco and San Pablo Bays with a continuous 400-mile network of bicycling and hiking trails. It will connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major toll bridges in the region. To date, approximately 210 miles of the alignment, slightly more than half the Bay Trail's ultimate length, have been completed.[1]

City of San Francisco

Property in San Francisco that is permanently dedicated to publicly-accessible park and recreational uses totals approximately 5,886 acres.[2] The provisional population estimate for San Francisco as of July 1,

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[1] Association of Bay Area Governments, About the Bay Trail, Overview, website: http://www.abag.ca.gov/abag/test/baytrail/overview.html, accessed December 15, 2009.

[2] Sue Exline, Planner, San Francisco Planning Department, personal communication, December 15, 2009.

2009, was 851,485,[3] yielding a ratio of approximately 7.0 acres of open space per 1,000 San Francisco residents. The City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance requiring land dedications or in-lieu fees, because San Francisco's population density, small land mass, and other development constraints make such policies infeasible.

A majority of local-serving parks and recreation facilities within San Francisco are owned and operated by the San Francisco Recreation and Park Department (SFRPD). The SFRPD maintains over 200 parks, playgrounds, and open spaces throughout the City, which function mainly for neighborhood use. The park system also includes 15 large, full-complex recreation centers, nine swimming pools, five golf courses, as well as hundreds of tennis courts, baseball diamonds, athletic fields and basketball courts. The SFRPD also manages the Marina Yacht Harbor, Candlestick Park, the San Francisco Zoo, and the Lake Merced Community Complex.[4] The SFRPD currently owns and manages a total of approximately 3,317 acres of parkland and open space.[5] Table V.K-1 shows the recreation facilities managed by SFRPD available in the City. In addition, the State owns approximately 171 acres at Candlestick Point State Recreation Area and the federal government owns approximately 619 acres primarily at the Presidio, which are managed by the National Park Service (NPS) as part of the Golden Gate National Recreation Area (GGNRA).[6] Figure V.K-1 illustrates Open Spaces within the City. This figure includes the City's community gardens, land owned by SFRPD and other open space areas (such as the Presidio, which is comprised of National Park land).

Table V.K-1
Recreation Facilities in San Francisco

Facilities	Quantity
Parks and Playgrounds	230
Recreation Centers	22
Neighborhood Parks	94
Golf Courses	6

Source: San Francisco Neighborhood Parks Council, "Green Envy: Achieving Equity in Open Space", November 2007, Table 5: page 1.

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[3] State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2000-2009. Sacramento, California, December 2009, website: http://www.dof.ca.gov/research/demographic/reports/estimates/e-2/2000-09/. accessed April 16, 2010.

[4] San Francisco Recreation and Park Department, Welcome, website: http://www.sfgov.org/site/recpark_index.asp?id=24168, accessed February 18, 2009.

[5] San Francisco Neighborhood Parks Council, "Green Envy: Achieving Equity in Open Space", November 2007, Table 5: page 1.

[6] San Francisco General Plan, Recreation and Open Space Element.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

Figure V.K-1
San Francisco Open Spaces

◆ Community Gardens

🟩 Owned by the CCSF Recreation & Parks Department

Other

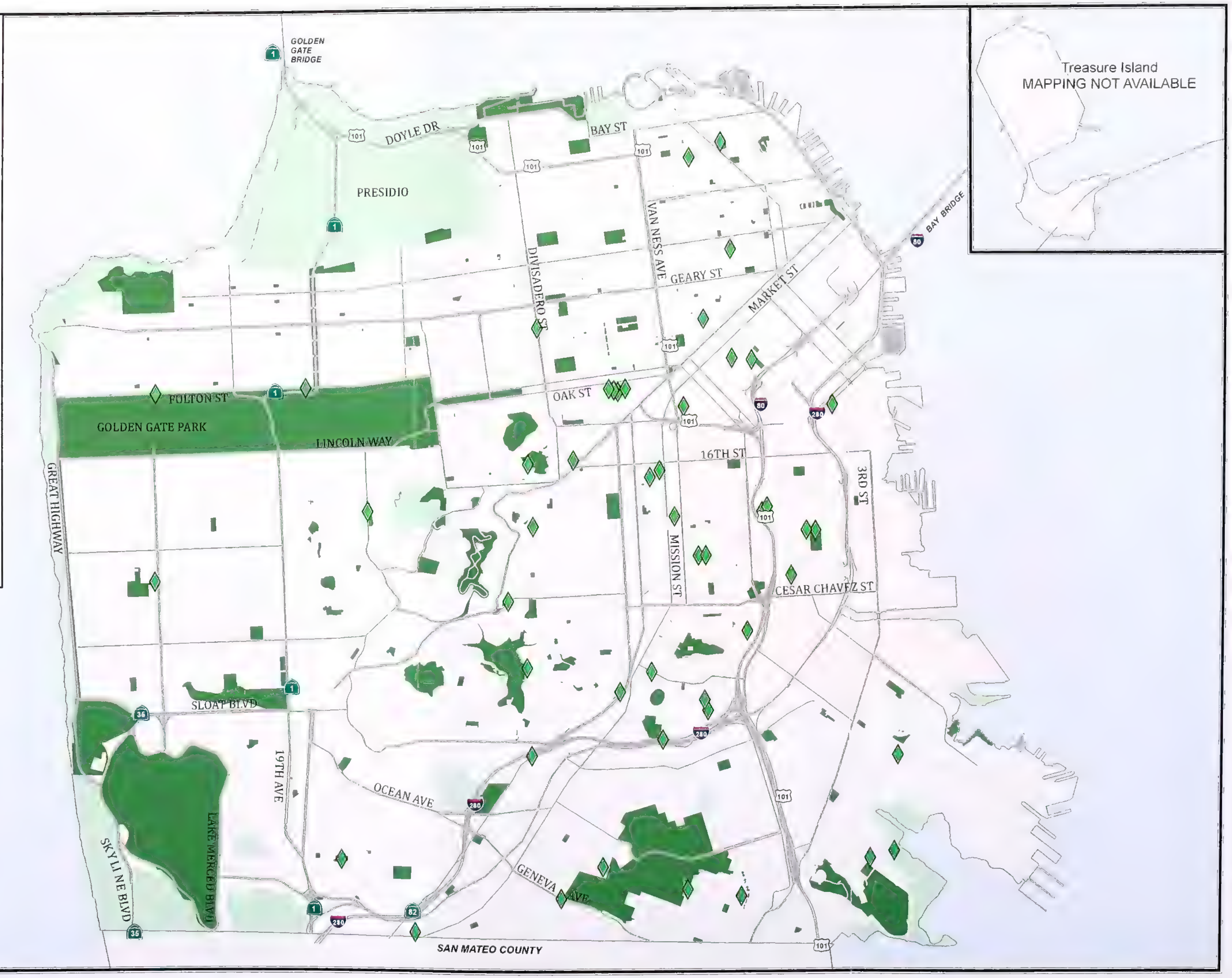
Water

Notes

1 'Other' refers to open spaces that are under the jurisdiction of state or federal agencies, open spaces that are maintained by other City Departments (Port, Dept. of Public Works, etc.), and privately-owned publicly-accessible open spaces

0 0.5 1 Mile

Source: CCSF Recreation and Parks Department, November 2009.



Within San Francisco, publicly accessible open spaces and recreational facilities are categorized according to their size and particular amenities as serving the City, district, neighborhood, or sub-neighborhood. Several larger open space areas, including Golden Gate Park (1,017 acres), the Lake Merced complex (700 acres; 368-acre lake) and John McLaren Park (317 acres) compose about one-half of the total City-owned acreage of recreational use. These larger areas provide programs, activities or recreation opportunities that serve the City as a whole. These spaces, in addition to smaller areas with unique attributes such as water features or hilltop vista points, function as city-serving open spaces because they attract residents from the entire City.

Smaller recreational facilities are primarily used by residents in the immediate surrounding area and are categorized by size and intended service area. District-serving parks are generally larger than ten acres and have a service area consisting of a three-eighths-mile radius around the park, while neighborhood-serving parks are generally one to ten acres and have a service area of one-quarter of a mile. Sub-neighborhood-serving open spaces, often referred to as mini parks, are too small to accommodate athletic facilities. These parks tend to include seating areas, small landscaped spaces, tot-lots targeting pre-school age children, and playgrounds with amenities generally for elementary school age children. The service area for sub-neighborhood parks is one-eighth of a mile.

REGULATORY SETTING

Federal

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 (42 United States Code Section 12181) prohibits discrimination on the basis of disability in public accommodation and state and local government services. Under the ADA, the Architectural and Transportation Barriers Compliance Board issues guidelines to ensure that facilities, public sidewalks, and street crossings are accessible to individuals with disabilities. Typical ADA improvements include creating handicap parking spaces, restroom modifications, door hardware requirements, and lighting upgrades. Play areas, meeting rooms, park restrooms, and other buildings and park structures are required to meet ADA compliance requirements.

National Park and Recreation Association

As discussed in the City's Recreation and Open Space Element, although the National Park and Recreation Association (NPRA) formerly called for 10 acres of open space per 1,000 city residents, the association no longer recommends a single absolute "average" of park acreage per population, in recognition of the fact that it is more relevant that each area plan and program facilities based upon community need. More important than raw acreage is accessibility (location, walking distance) and whether the facility provides needed services to the population in question. Furthermore, the San Francisco Recreation and Open Space Element (ROSE) states that the most critical provision of open space is its distribution. All types of open space activity – from sports fields to playgrounds – should be accessible to and within walking distance of every resident of the City. One-half mile is commonly accepted as a distance that can be comfortably walked in 10 minutes, and as a distance most people are willing to walk to access community uses. For most open space activities, including active ones such as hiking, biking and sports activities; or for passive ones, like picnicking, this walking distance is acceptable. However, for activities that involve small children, such as a playground, or require moving through denser areas, a ¼ mile, or five minute, walk is more appropriate.[7]

State

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California Legislature in 1965 to preserve open space and parkland in the rapidly urbanizing areas of the state. This legislation was in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is three acres per 1,000 persons, then the community may require dedication based on a standard of five acres per 1,000 persons residing in the subdivision. If the existing amount of parkland in a community is less than three acres per 1,000 persons, then the community may require dedication based on a standard of only three acres per 1,000 persons residing in the subdivision. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance. As stated previously, the City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. However, as noted below, the City has adopted requirements for the payment of impact fees to provide parks and recreation facilities in designated areas throughout the City.

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to recreation and public space are discussed in Section V.A (Plans and Policies) of this Draft EIR. As discussed therein, the Recreation & Open Space Element is currently undergoing an update process. A draft of the Recreation & Open Space Element was prepared and released for public review in May 2009. General Plan objectives and policies discussed in this Section are as follows:

Objective 4: Provide opportunities for recreation and the enjoyment of open space in every San Francisco neighborhood.

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[7] Draft Recreation and Open Space Element, San Francisco General Plan, May 2009.

Policy 4.5: Require private usable outdoor open space in new residential development.

Policy 4.6: Assure the provision of adequate public open space to serve new residential development.

San Francisco Park Code

The San Francisco Park Code regulates public use of the city parks including vehicle use within the parks, permit requirements, and regulations concerning the use of United Nations Plaza, Hallidie Plaza, and Yerba Buena Gardens, all located in the City.

Proposition C and the Recreation and Park Acquisition Policy

In 2000, San Francisco voters approved Proposition C, extending the Open Space Fund that is used to finance acquisitions and capital improvements for the SFRPD. The legislation created an annual set-aside of two and one-half cents for each one hundred dollars assessed valuation from the property tax levy. The Open Space Fund is funded through Fiscal Year 2030-2031. The legislation stipulates that at least five percent of the revenue raised through the set-aside be allocated to new land acquisition. In 2006, the SFRPD, at the request of the Recreation and Park Commission, published the Recreation and Park Acquisition Policy to provide clear guidelines for the expenditure of acquisition funds under the Recreation and Park Commission's jurisdiction.

The first objective stated in this policy is to align SFRPD acquisition priorities with Map 9 of the General Plan Recreation and Open Space Element, which identifies high need areas based on population, density, age, and income. However, the SFRPD ultimately used a separate map modeled after Map 9 using updated demographic statistics (high residential, senior, and children densities per net acre, as well as and low household incomes relative to the city median household income) from Census 2000 data to determine high and highest priority need areas. In addition, using neighborhood service areas, the SFRPD conducted a gap analysis for the policy report. Ultimately, the SFRPD produced Neighborhood Recreation and Open Space Improvement Priority Plan Maps showing the areas of highest need according to demographic statistics and areas that are also underserved in terms of existing recreational resources.

While not under the purview of SFRPD, it should be noted that the city also contains several privately-owned public open spaces (POPOS). POPOS include publicly accessible spaces owned that are typically maintained by the owner of an office building and can consist of plazas, roof gardens, greenhouses, or atriums.

San Francisco Planning Code

The Planning Code requires usable open space in conjunction with development projects. As a part of the permitting process, project sponsors are required to incorporate certain amounts of open space, dependant on a proposed project's use and size as well as the zoning district in which the site is located, to serve future project residents and/or employees. Planning Code Section 135 indicates the square footage of open space required for new residential units, ranging from 36 to 300 square feet per unit. The requirement is generally higher in single-use residential districts than in mixed-use residential districts.

Commonly accessible open space (designed for use jointly by two or more units) is permitted at a ratio typically 1.33 square feet of the required amount of private open space. Open space is not generally required for non-residential uses outside the South of Market districts (and the C-3, Downtown districts). Tables V.K-2 and V.K-3 provide the minimum usable open space for dwelling units and group housing inside and outside the Eastern Neighborhoods Mixed Use District, respectively. The Eastern Neighborhoods is made up of the Mission, Showplace/Potrero, East SoMa, and Central Waterfront.

The Planning Code also requires payment of impact fees in designated areas throughout the City and a percent of those impact fees are intended to mitigate impact of new development on open space.

Table V.K-2
Minimum Usable Open Space for Dwelling Units and Group Housing Outside the Eastern Neighborhoods Mixed Use District

District	Square Feet Of Usable Open Space Required For Each Dwelling Unit If All Private	Ratio of Common Usable Open Space That May Be Substituted for Private
RH-1(D), RH-1	300	1.33
RH-1(S)	300 for first unit; 100 for minor second unit	1.33
RH-2	125	1.33
RH-3	100	1.33
RM-1, RC-1, RTO, RTO-M	100	1.33
RM-2, RC-2, SPD	80	1.33
RM-3, RC-3, RED	60	1.33
RM-4, RC-4, RSD	36	1.33
C-3, C-M, SLR, SLI, SSO, M-1, M-2	36	1.33
C-1, C-2	Same as for the R District establishing the dwelling unit density ratio for the C-1 or C-2 District property	1.33
NC-1, NC-2, NCT-1, NCT-2, NC-S, Inner Sunset, Sacramento Street, West Portal Avenue, Ocean Avenue	100	1.33
NC-3, Castro Street, Inner Clement Street, Outer Clement Street, Upper Fillmore Street, Haight Street, Union Street, Valencia Street, 24th Street-Mission, 24th Street-Noe Valley, NCT-3, SoMa, Mission Street	80	1.33
Broadway, Hayes-Gough, Upper Market Street, North Beach, Polk Street	60	1.33
Chinatown Community Business, Chinatown Residential Neighborhood Commercial, Chinatown Visitor Retail	48	1.00
DTR	This table not applicable. 75 square feet per dwelling. See Sec. 135(d)(4).	

Source: Table 135A in the San Francisco Planning Code.

Table V.K-3
Minimum Usable Open Space for Dwelling Units and Group Housing Inside the Eastern Neighborhoods Mixed Use District

Square feet of usable open space per dwelling unit, if not publicly accessible	Square feet of usable open space per dwelling unit, if publicly accessible	Percent of open space that may be provided off site
80 square feet	54 square feet	50%

Source: Table 135B in the San Francisco Planning Code.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated;
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment;
- Physically degrade existing recreational resources; or
- Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered park or recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how and where new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

Impact RE-1:** **The proposed Housing Elements would not result in significant impacts related to the substantial deterioration of parks or recreational facilities, inclusion of recreational facilities or require the construction or expansion of recreational facilities, or adverse physical impacts with the provision of, or the need for, new or physically altered park or recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives. (Less than Significant)

New construction could result in impacts related to an adverse physical effect on the environment if new housing would require the construction or expansion of recreational facilities in underserved areas. The proposed Housing Elements do not propose any recreational facilities nor would they directly result in new construction. As discussed previously, the City currently has a ratio of 7.0 acres of open space per 1,000 San Francisco residents and the City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. The proposed Housing Elements would not result in new development; new residential development would be required to comply with the previously discussed regulations including Proposition C, which ultimately resulted in the Neighborhood Recreation and Open Space Improvement Priority Plan Maps showing the areas of highest need according to demographic statistics and areas underserved in terms of existing recreational resources. New housing development could include recreational facilities or require the construction or expansion of recreational facilities in order to comply with the City's Planning Code. Specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. The proposed Housing Elements include policies that would direct growth to certain areas of the City and policies that would allow for incremental increases in residential building densities within the same allowable densities. Policies that direct growth to certain areas of the City could consolidate new construction to these areas, which could increase residents in areas that may currently be underserved by neighborhood parks. Policies that relate to building densities could incrementally increase the number of residents using neighborhood parks.

Figure V.K-2 shows the housing unit capacity and pipeline units that are not within the service area of an existing or proposed open space area. According to this data, approximately 436 units in the City's pipeline and capacity for approximately 2,310 units occur outside areas served by an existing open space. The areas of the City with the greatest amount of pipeline and capacity units not served by existing open space include South Bayshore, Bayview Hunters Point, and Downtown. The Planning Department has been working on open space planning concepts for the Eastern Neighborhoods Planning Areas, and many open space acquisitions/expansion have been identified as part of that process.[8] In addition, there are potential open space acquisitions associated with the Balboa Park Station Area Plan. Once funds have been identified for park improvements, the SFRPD has one planned park to be located at 4-8 Guy Place, a 3,500-square foot lot in the Rincon Hill Planning Area. Approximately 3,111 units in the City's pipeline

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[8] Daniel LaForte, San Francisco Recreation & Parks, response to service letter request, December 21, 2009.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

Figure V.K-2 Potential Housing Units: Capacity and Pipline Units not within the Service Area of an Existing or Proposed Open Space

▨ Not within a Service Area of an Existing or Proposed Open Space

Parks

Water

Notes

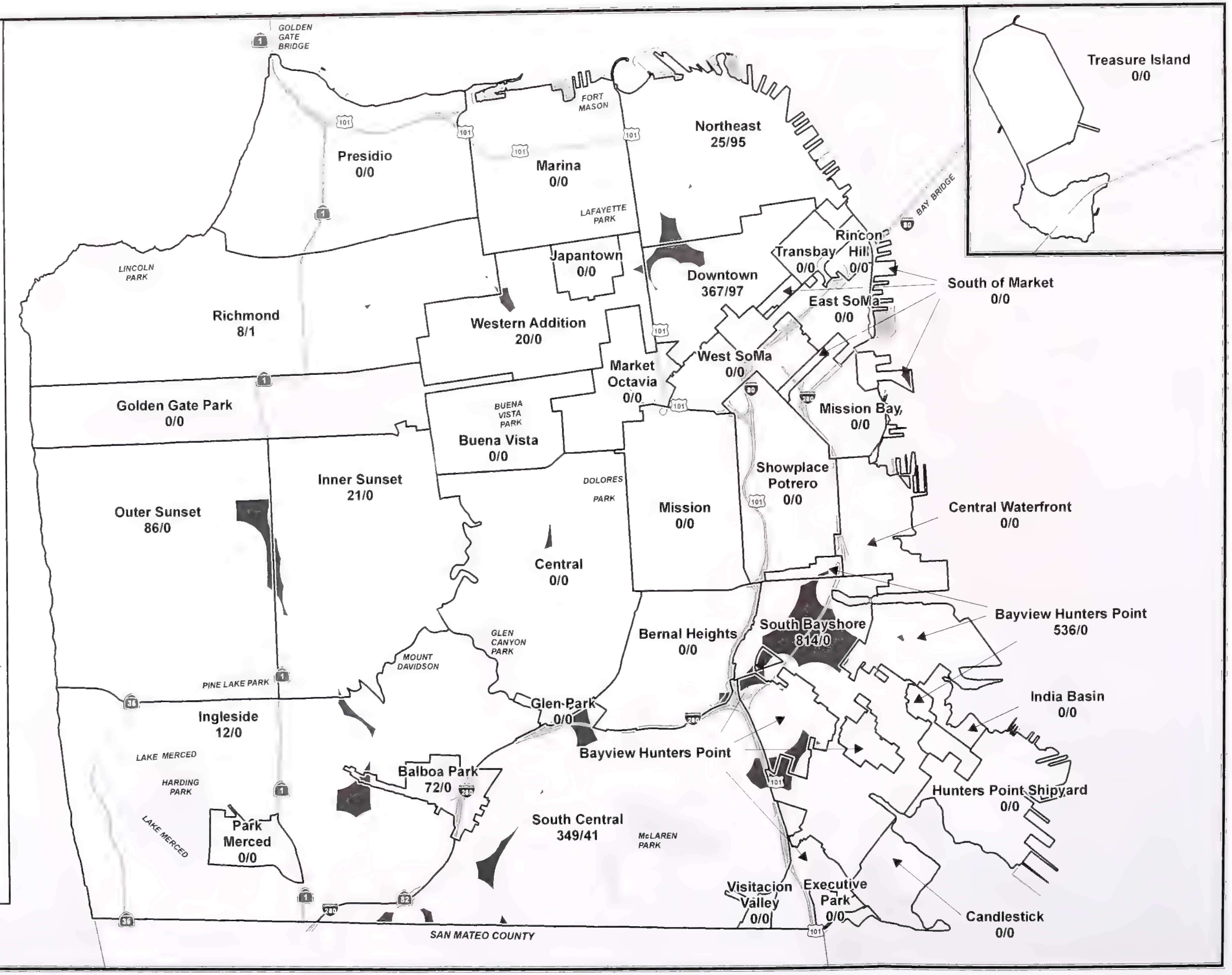
1. Numerical values represent housing capacity within an area not serviced by an open space followed by net pipeline units within these areas (Housing Unit Capacity/ Pipeline Units), except as noted below.

2. Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated.

3. Open space service areas are defined as :
- within 1/8 mile of an open space less than 1 acre in size.
- within 1/4 mile of an open space 1-10 acres in size.
- within 3/8 mile of an open space 10-30 acres in size.
- within 1/2 mile of an open space over 30 acres in size.

4. A number of open spaces have been proposed as part of the City's recently completed community planning processes, these open spaces have been included in this map.

Sources:
Capacity and Pipeline: CCSF Planning Department, Q1 2009
Open Space Service Areas: CCSF Planning Department & CCSF Recreation and Parks Department, May 2009



2004 Housing Element Analysis

The following 2004 Housing Element policies could result in impacts related to the construction or expansion of recreational facilities or the need for new or expanded park or recreational facilities by directing growth to certain areas of the City and promote increased building densities within the same allowable densities, potentially consolidating new construction activities to non-residential areas of the City and increasing the number of residents using recreational facilities.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
Promote increased density-related development standards.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.
Study reduced parking and private open space provisions.	IM 11.8.1: The Planning Department, with the support and input from local neighborhoods, study the impacts of reduced parking and private open space provisions and will consider revising the Planning Code accordingly.	

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 2004 Housing Element also encourages new housing through on-going and future community planning processes (Policies 1.1, 11.6 and Implementation Measures 1.3.1, 1.3.2, 1.6.2, and 2.4.2) and on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4). Policies that direct growth to certain areas of the City could increase the amount of new housing occurring in those areas, which could increase the number of residents using recreational facilities in these areas. Policies that encourage development in the City's former industrial or commercial areas could increase residents in these areas which may currently be underserved by neighborhood parks. This could ultimately cause the need for construction or expansion of parks to accommodate increased demand.

The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, thereby incrementally increasing the number of residents within a given building using recreational facilities. Although increased density standards may only incrementally increase the number of residents in each building, when combined with policies that also direct growth to certain areas of the City (as discussed above), the 2004 Housing Element policies could not only consolidate new construction to certain areas of the City, but also incrementally increase the average number of residents using recreational facilities. Therefore, the 2004 Housing Element policies could increase the average number of residents using recreational facilities in certain areas of the City.

2004 Housing Element Implementation Measure 11.8.1, which calls for studying reduced private open space and potential revisions to the Planning Code, could result in revisions to the Planning Code, allowing for reduced open space requirements in already underserved areas of the City. New residents in areas currently underserved by inadequate recreation facilities and reduced open space could put additional demands on existing parks, thereby facilitating the need for construction or expansion of recreational facilities. However, as illustrated in Figure V.K-2, because limited portions of the City are not served by open space areas these changes would only potentially affect a very small area of the City. Furthermore, any potential reduction in open space would be incremental and, combined with the limited geographical scope of the affected area, would not result in a significant environmental impact. As discussed previously, many open space acquisitions/expansions have been identified by the Planning Department and SFRPD, independent of the proposed 2004 Housing Element. Furthermore, SFRPD would continue to acquire new open space/recreation facilities pursuant to Proposition C. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the construction or expansion of recreational facilities or the need for new or expanded park or recreational facilities.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

The following 2009 Housing Element policies could result in impacts related to the construction or expansion of recreational facilities or the need for new or expanded park or recreational facilities by directing growth to certain areas of the City, promoting increased density standards, and potentially reducing open space requirements for affordable housing, thereby consolidating new construction within those areas and increasing the number of residents using recreational facilities in certain areas.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure (Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80), thereby directing housing to commercial areas. As discussed previously, directing new housing to certain areas of the City could result in an increase in number of residents using recreational facilities in certain areas and could increase residents in areas that may currently be underserved by neighborhood parks. This could ultimately cause the need for construction or expansion of parks to accommodate increased demand.

The 2009 Housing Element also promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). Overall, the 2009 Housing Element does not promote increased density more so than the 1990 Residence Element. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, thereby incrementally increasing the number of residents within a given building using recreational facilities. Although increased density standards may only incrementally increase the number of residents in each building, when combined with policies that also direct growth to certain areas of the City (as discussed above), the 2009 Housing Element policies could not only consolidate new construction to certain areas of the City, but also incrementally increase the average number of residents using recreational facilities. Similar to 2004 Housing Element Implementation Measure 11.8.1, 2009 Housing Element Policy 7.5 could allow for reduced open space requirements for development potentially within areas not adequately served by existing facilities. Therefore, the 2004 Housing Element policies could increase the average number of residents using recreational facilities in certain areas that may currently be underserved by recreational facilities.

The following 2009 Housing Element policy and implementation measure could reduce the 2009 Housing Element's potential need for construction or expansion of recreational facilities by encouraging quality of life elements in residential developments.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Ensure new development is adequately served by recreational facilities.	Policy 12.2: Consider the proximity of quality of life elements such as open space, child care and neighborhood services, when developing new housing units.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Implementation Measure 85: Planning shall ensure community plans for growth are accommodated by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	
	Implementation Measure 86: Planning shall formalize an "Implementation Group" in the Planning Department, to manage the implementation of planned growth areas after Plan adoption, including programming impact fee revenues and coordinating with other City agencies to ensure that needed infrastructure improvements are built.	

As shown above, the 2009 Housing Element would ensure that new development resulting from community planning processes would be accompanied by capital plans for supporting infrastructure, including recreational facilities (Policy 12.2 and Implementation Measures 85 and 86). Because the 2009 Housing Element includes measures to ensure community plans are adequately served by recreation facilities, the 2009 Housing Element could indirectly promote the construction or expansion of recreational facilities. However, the need for new facilities would be determined based on additional recreational needs and location of the community plan and is, therefore, most appropriately addressed with respect to a specific community plan proposal. Given that there are limited portions of the City not currently served by open spaces and that the Planning Department and SFRPD have identified open space acquisitions/expansions, independent of the 2009 Housing Element, and pursuant to Proposition C and previous community planning efforts, the 2009 Housing Element would have a ***less than significant*** impact with respect to the construction or expansion of recreational facilities or the need for new or expanded park or recreational facilities.

Impact RE-2: The proposed Housing Elements would not physically degrade existing recreational resources. (Less than Significant)

New construction could result in impacts related to the degradation of existing recreational resources if new housing would convert existing recreational uses to residential uses, adversely affect specific recreational opportunities, or otherwise physically degrade recreational resources. The proposed Housing Elements do not propose any zoning changes and Public Districts, where much of the City's open space and recreational facilities are located, and would therefore not be at risk for conversion to residential uses.

In the City, which has high housing costs, there exists a tradeoff between open space and affordable housing. Vacant lots, some of which provide open space, can provide opportunity for affordable housing due to their location or previous uses being less desirable than lots already developed with residential units. Also, private recreational resources could potentially be identified as opportunity or soft sites. Therefore, a balance between the preservation of open space and the development of affordable housing should be reached.

2004 Housing Element

As discussed under Impact RE-1, the 2004 Housing Element and 2009 Housing Element directs growth to certain areas of the City and promotes increased density-related development standards, which could potentially increase demands on existing recreational facilities. There exists limited portions of the City that are not currently served by open space/recreational facilities. Furthermore, both the Planning Department and the SFRPD have identified open space acquisition/expansion, independent of the proposed Housing Elements, and pursuant to Proposition C or previous community planning efforts. Therefore, 2004 and 2009 Housing Element policies that increase density and/or direct growth to certain areas of the City would result in a ***less than significant*** impact with respect to the degradation of recreational resources.

Cumulative Impacts

The geographic context for cumulative recreation impacts is the entire City of San Francisco. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the project area or immediately adjacent to its project boundaries resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to recreation. Cumulative impacts could result from policies that promote increased density or direct growth to certain areas of the City, primarily those areas that are currently underserved by recreational facilities. Increased density in certain areas could place increased demands on existing facilities, thereby contributing to the need for new or expanded facilities or resulting in degradation of existing facilities. However, as discussed throughout this Draft EIR, growth would occur regardless of implementation of the Housing Elements. The proposed Housing Elements provide direction for how new development in the City should occur, with an emphasis on affordability. New development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans that are intended to reduce impacts to recreation. The proposed Housing Element are public policy documents and would not directly affect recreation. New development could affect such resources, but would be evaluated on a project-by-project basis.

Changes to the existing recreation environment in the area could occur through the conversion of open space or recreational facilities to residential uses, population growth in an area that is underserved by recreational resources, or otherwise degrade recreational resources. However, it is assumed that future housing development would be consistent with Planning Code requirements for open space and, pursuant to Proposition C, SFRPD would continue the acquisition and expansion of recreational facilities. New development is also anticipated to be consistent with CEQA review, mitigation requirements, and design review. For this reason, cumulative impacts on recreation as a result of increasing the use of recreational facilities and potential deterioration of these resources would be ***less than significant***. The Housing Elements would not contribute to such cumulative recreation impacts because they would not directly result in population growth. The proposed Housing Elements would have a ***less than significant*** impact with respect to the cumulative impacts to recreation from increased use of recreation facilities or potential deterioration of these resources.

It is also anticipated that housing development would comply with Section 135 of the Planning Code. Cumulative impacts on recreation as a result of the construction or expansion of recreational facilities or the degradation of recreational facilities would be ***less than significant***. The contribution of the Housing Elements would be ***less than significant*** and is not cumulatively considerable because ultimately the Housing Elements do not propose any specific projects, zoning changes, or directly result in increases to population. This cumulative impact would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

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V. ENVIRONMENTAL SETTING AND IMPACTS
L. UTILITIES AND SERVICE SYSTEMS

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to wastewater treatment requirements, wastewater treatment facilities, stormwater drainage facilities, sufficiency of water supplies, adequate wastewater treatment capacity, adequate landfill capacity, and compliance with federal, state, and local statutes and regulations related to utilities and service systems. Responses from service providers are included in Appendix H to this EIR.

ENVIRONMENTAL SETTING

Water Supply

The San Francisco Public Utilities Commission (SFPUC) provides water, wastewater, and municipal power services to the City. The SFPUC manages a complex water supply system stretching from the Sierra Nevada to San Francisco, featuring a series of reservoirs, tunnels, pipelines, and treatment systems. The SFPUC operates 22 pump stations and approximately 1,240 miles of pipelines that deliver water to local customers.[1] Approximately 800,000 people in the City receive water from this distribution system.

SFPUC Regional Water System

The SFPUC Regional Water System (RWS) currently serves an average of approximately 265 million gallons per day (mgd) to 2.5 million users in Tuolumne, Alameda, Santa Clara, San Mateo and San Francisco counties. Approximately one-third of those customers reside in San Francisco. The SFPUC RWS is a complex system and supplies water from two primary sources:[2]

- Tuolumne River through the Hetch Hetchy Reservoir; and
- Local runoff into reservoirs in the Bay Area and reservoirs in the Alameda and Peninsula watersheds.

Water stored by Hetch Hetchy Reservoir through the Hetch Hetchy Water and Power (HHWP) Project represents the majority of the water supply available to the SFPUC. On average, the HHWP Project provides over 85 percent of the water delivered by the SFPUC. During drought, the water received from the HHWP Project can amount to over 93 percent of the total water delivered.

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[1] San Francisco Public Utilities Commission (SFPUC), Water Service General Information, website: http://sfwater.org/detail.cfm/MC_ID/10/MSC_ID/46/C_ID/364/Keyword/2.3%20million, accessed April 5, 2009.

[2] SFPUC, 2005 Urban Water Management Plan for the City and County of San Francisco, at pages 11-16, December 2005.

Bay Area reservoirs provide on average approximately 15 percent of the water delivered by the SFPUC RWS. The local watershed facilities are operated to conserve local runoff for delivery. On the San Francisco Peninsula, the SFPUC utilizes Crystal Springs Reservoir, San Andreas Reservoir, and Pilarcitos Reservoir to capture local watershed runoff. In the Alameda Creek watershed, the SFPUC constructed the Calaveras Reservoir and San Antonio Reservoir. In addition to capturing runoff, San Antonio, Crystal Springs, and San Andreas reservoirs also provide storage for Hetch Hetchy water diversions. The local watershed facilities also serve as an emergency water supply in the event of an interruption to Hetch Hetchy diversions.

The amount of water available to the SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is dependent on reservoir storage to ensure its water supplies. More importantly, reservoir storage provides the SFPUC RWS with year-to-year water supply carry-over capability. During dry years the SFPUC has a very small share of Tuolumne River runoff available and the local Bay Area watersheds produce very little water. Reservoir storage is critical to the SFPUC during drought cycles since it enables the SFPUC to carry-over water supply from wet years to dry years.

Local Water Supply Sources

Groundwater

San Francisco overlies all or part of seven groundwater basins. These groundwater basins include the Westside, Lobos, Marina, Downtown, Islais Valley, South and Visitation Valley basins. The Lobos, Marina, Downtown and South basins are located wholly within the City limits, while the remaining three extend south into San Mateo County. The portion of the Westside Basin aquifer located within San Francisco is referred to as the North Westside Basin. With the exception of the Westside and Lobos basins, all of the basins are generally inadequate to supply a significant amount of groundwater for municipal supply due to low yield.

Early in its history, San Francisco made significant use of local groundwater, springs, and spring-fed surface water. However, after the development of surface water supplies in the Peninsula and Alameda watersheds by Spring Valley Water Company and the subsequent completion of the Hetch Hetchy Reservoir and aqueduct in the 1930's, the municipal water supply system has relied almost exclusively on surface water from local runoff, the Alameda and Peninsula watersheds, and the Tuolumne River watershed. Local groundwater use, however, has continued in the City primarily for irrigation purposes. The San Francisco Zoo and Golden Gate Park use groundwater for non-potable purposes.

Local Recycled Water

Currently in San Francisco, disinfected secondary-treated recycled water from the SFPUC's Southeast Water Pollution Control Plant (SEWPCP) is used on a limited basis for wash-down operations, which is a water and/or chemical high-pressure cleaning process, and is provided to construction contractors for dust control and other nonessential construction purposes. Current use of recycled water for these purposes in San Francisco is less than one mgd.

Local Water Conservation

It is anticipated that through the continuation and expansion of conservation programs, per capita water use will continue to decrease into the future. Current gross per capita water use within San Francisco is 91.5 gallons per capita per day (gpcd) with residential water use calculated to be approximately 57 gpcd, the lowest use of any major urban area in California. The SFPUC's demand management programs range from financial incentives for plumbing devices to improvements in the distribution efficiency of the system.

Water Supply and Demand

The SFPUC's retail water customers include the residents, business and industries located within the corporate boundaries San Francisco. Table V.L-1 provides a breakdown of SFPUC water supplies from 2010 to 2030. As shown, the SFPUC's retail water supplies increase to 94.5 mgd in 2015 when the SFPUC's Water System Improvement Plan (WSIP) water supply sources are readily available.

Under the Water Shortage Allocation Plan (WSAP), SFPUC retail customers would experience no reduction in deliveries at a ten percent shortage. However, during a twenty percent system-wide shortage, the retail customers would experience a 1.9 percent reduction in retail deliveries. This assumes the full development of the additional ten mgd of local WSIP supplies in the retail service area. These ten mgd of local supplies are not subject to reduction under the WSAP as the WSAP only allocates water supplies from the RWS. Table V.L-2 shows SFPUC RWS retail supply schedule during normal, single dry year, and multiple dry year periods.

Table V.L-1
SFPUC Water Supplies 2010-2030

Current Water Supply Sources	2010	2015	2020	2025	2030
SFPUC RWS (Surface water: Tuolumne River, Alameda & Peninsula)[1]	81.0	81.0	81.0	81.0	81.0
Groundwater Sources					
Groundwater (In-City Irrigation Purposes)	2.5[2]	0.5[3]	0.5[3]	0.5[3]	0.5[3]
Groundwater at Castlewood[4]	1.0[4]	1.0[4]	1.0[4]	1.0[4]	1.0[4]
Groundwater: Treated for Potable – Previously used for In-City Irrigation Purposes[5]	0.0	2.0	2.0	2.0	2.0
Groundwater Subtotal	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**
Current Water Supply Subtotal	**84.5**	**84.5**	**84.5**	**84.5**	**84.5**
WSIP Water Supply Sources					
Groundwater Development: Potable from SF GWSP (Westside Groundwater Basin)[6]	0.0	2.0	2.0	2.0	2.0
Recycled Water Expansion Irrigation[7]	0.0	4.0	4.0	4.0	4.0
Supply Conservation Program	0.0	4.0	4.0	4.0	4.0
WSIP Supply Subtotal	**0.0**	**10.0**	**10.0**	**10.0**	**10.0**
Total Retail Supply (Current and WSIP Supplies)	**84.5**	**94.5**	**94.5**	**94.5**	**94.5**

Notes:

Table V.L-1
SFPUC Water Supplies 2010-2030

Current Water Supply Sources	2010	2015	2020	2025	2030

(1) RWS surface water supplies are subject to reductions due to below-normal precipitation. This may affect dry year supplies - model shows supply reduction occurs in year 2 of multiple dry year event. (Source: SFPUC 2008 WSIP Phase Variant Supply limitation)

[2] *Groundwater serves irrigation to Golden Gate Park, SF Zoo, and Great Highway Median. (Source: 2005 SFPUC UWMP Table 8B page 43)*

[3] *A Groundwater reserve of 0.5 mgd for irrigation purposes will remain as part of SFPUC's non-potable groundwater supply. (Source: SFPUC 2008 WSIP Phase Variant)*

[4] *Castlewood current and projected use remains unchanged over 20 year planning horizon. (Source: 2005 SFPUC UWMP Table 8B page 43)*

[5] *2.0 mgd of groundwater treated and blended for Potable water supply purposes. (Source: 2005 SFPUC UWMP Table 8B page 43)*

[6] *2.0 mgd of new groundwater developed as part of the new local supply target. (Source: SFPUC 2008 WSIP Phase Variant Supply Target)*

[7] *2.0 mgd of Recycled used for irrigation at Golden Gate Park, SF Zoo, Great Highway Median, and 2.0 mgd for other non-potable purposes. (Source: SFPUC 2008 WSIP Phase Variant Supply Target)*

Source: SFPUC, Final Water Supply Availability Study for City and County of San Francisco, October 2009, at page 12.

Table V.L-2
2005 – 2030 SFPUC Retail Allocations in Normal, Dry, and Multiple Dry Years

Year	Normal Dry Year		Single Dry Year		Multiple Dry Year Event[2]					
					Year 1		Year 2		Year 3	
	mgd	%	mgd	%	mgd	%	mgd	%	mgd	%
2010[1], 2015, 2020, 2025, and 2030	81.0	100	81.0	100.0	81.0	100.0	79.5	98.1	79.5	98.1

Notes:

[1] *In 2010 the Retail allocation of RWS supply is reduced to 81 mgd to reflect the Retail allocation under the 2018 Phased WSIP Variant. 10 mgd of recycled water, groundwater, and conservation will be implemented by 2015 to make up for the loss in RWS supply. The 10 mgd of local supply is not subject to reduction under the WSAP.*

[2] *Under the WSAP, the SFUPC Retail allocations at a 10 percent shortage are 85.86 mgd. However, due to the Phased WSIP Variant, only 81 mgd of RWS supply is shown. The remaining supply can be transferred from or to the Wholesale Customers under the terms of the Water Supply Agreement.*

Source: SFPUC, Final Water Supply Availability Study for City and County of San Francisco, October 2009, at page 19. Original Source: San Francisco Public Utilities Commission. 2005. Urban Water Management Plan for the City and County of San Francisco. p. 54-57 and discussions with SFPUC staff.

The SFPUC incorporated the 2009 San Francisco Planning Department projections for residential and non-residential growth in San Francisco to assess the results of the Department's projections and its effects on the City's water demand. Table V.L-3 shows the results of the 2009 demand forecasts and represents the anticipated growth in demand commencing in 2010 and extending over the 20-year planning horizon to 2030. As shown, incremental residential growth demand commences in 2015 at 0.47 mgd and progresses to 1.89 mgd in 2030. In 2015, demand drops slightly due to a reduction in total residential demand.

Table V.L-3
SFPUC Retail Demand (mgd)

Users, Facilities, and Entities	Projected Water Demand				
	2010	**2015**	**2020**	**2025**	**2030**
Residential Demand (Single & Multiple Family)[1]	44.70	43.80	43.20	42.90	42.90
New Residential Demand generated by Projects and Incremental Growth[2,4]	-	0.47	0.95	1.42	1.89
Subtotal	**44.70**	**44.27**	**44.15**	**44.32**	**44.79**
Non-Residential – Business/Industrial Demands[3,4]	30.21	30.52	30.83	31.14	31.73
Subtotal	**74.91**	**74.79**	**74.97**	**75.46**	**76.52**
Unaccounted-for System Losses	7.30	7.30	7.30	7.30	7.30
Subtotal	**82.21**	**82.09**	**82.27**	**82.76**	**83.82**
Other Retail Demands[5]	4.90	4.90	4.90	4.90	4.90
Lawrence Livermore Laboratory; Groveland CSD[6]	1.20	1.20	1.20	1.20	1.20
City Irrigation Demand[7]	2.5	2.5	2.5	2.5	2.5
Castlewood Community Demand[8]	1.0	1.0	1.0	1.0	1.0
Total Retail Demand	**91.81**	**91.69**	**91.87**	**92.36**	**93.42**

Notes:

[1] *Residential Demands (Source: 2005 SFPUC UWMP Table 8B, page 43)*

[2] *See Table 5-4. Multiple Family – [In 2030 Incremental Growth of 0.24 mgd + (CP-HPS II 10,500 DU) 1.04 mgd + (TI-YBI 8,000 DU) 1.17 mgd + (Parkmerced 8,900 total DU) 0.94 mgd = 3.40 mgd] Existing Demand is 1.51 mgd at all sites. [3.40 mgd – 1.51 = 1.89 mgd] as shown in Table 4-2 (Sources: ARUP Water Demand Memo for CP-HPS Phase II September 25, 2009; Parkmerced Water Demand Spreadsheet June 30, 2009; Treasure Island Water Technical Report December 2008 Updated August 2009)*

[3] *See Table 5-5. Agriculture, Mining, Construction, Manufacturing, Transportation, Wholesale & Retail Trade, F.I.R.E., Services, Gov't including Builders – Contractors and Docks – Shipping. (Source: Adapted from 2009 ABAG Employment Projections in conjunction with SF Planning, July 2009) As developed in the Demand Study, SFPUC derived the employment water demands by taking the ABAG employment projections and multiplying by 42.42 gallons per employee per day and is consistent with SFPUC's demand projection methodology.*

[4] *See Table 5-5. Non-residential (jobs/employment) demands at major project sites were assumed to be contained in the 2009 ABAG Employment projections. Growth in demand is incrementally increased to reflect the growth in jobs over the 20-year planning horizon. To avoid double-counting the water demand associated with the 2009 SF Planning Non-Residential Employment Projections and the non-residential demand calculated in the developer estimates at each of the Project sites, the total water demand at each of the developments was adjusted to remove the non-residential demands. This study assumes all non-residential demand is accounted for in the 2009 SF Planning Non-Residential Employment Projections. Table 5-4 shows the net change in water demand at the Project sites and the adjusted change in water demand without non-residential demand. Adapted by PBS&J and SFPUC September 2009 from ARUP Water Demand Memo for CP-HPS Phase II September 25, 2009; Parkmerced Water Demand Spreadsheet June 30, 2009; Treasure Island Water Technical Report December 2008 Updated August 2009*

[5] *US Navy, SF International Airport, and other suburban/municipal accounts. (Source: 2005 SFPUC UWMP Table 8B, page 43)*

[6] *Lawrence Livermore Laboratories (0.8 mgd); Groveland CSD (0.4 mgd) (Source: 2005 SFPUC UWMP Table 8B, page 43)*

[7] *City Irrigation at Golden Gate Park, Great Highway Median and SF Zoo. (Source: 2005 SFPUC UWMP Table 8B, page 43)*

[8] *Castlewood Community demand served by wells in the Pleasanton well field. (Source: 2005 SFPUC UWMP Table 8B, page 43)*

Source: SFPUC, Final Water Supply Availability Study for City and County of San Francisco, October 2009, at page 26.

Table V.L-4 compares SFPUC retail supplies and demand during normal, single dry year, and multiple dry year periods. In 2010, prior to the development of the 10 mgd of local supplies, SFPUC can access an annual average 84.50 mgd from all water supply sources. As previously mentioned, beginning in 2015, when the WSIP sources are readily available, the SFPUC's retail water supplies increase to 94.5 mgd.

These supplies are assumed to be available in the quantities listed in Table V.L-4. SFPUC intends to use these supplies to meet its retail customer demands. The deficit shown in 2010 is the result of reducing the RWS supply to 81 mgd as per the Phased WSIP, without full development of the additional 10 mgd of new water supplies. However, Retail demand is currently lower than the 2010 projected demand (Fiscal Year 2007-2008 use was 83.9 mgd). If Retail demand exceeds the available RWS supply of 81.0 mgd between 2010 and 2015, and total RWS deliveries exceed 265 mgd between 2010 and 2015, the Water Supply Agreement allows the SFPUC to purchase additional water with the payment of an Environmental Surcharge.

As shown in Table V.L-4, during a multiple dry-year event[3] commencing in 2030, it is possible that the SFPUC will not be able to meet 100 percent of retail demand in 2030. As modeled, a supply shortfall of 0.42 mgd is anticipated to occur in the second and third year of a multiple dry-year event. To overcome the potential 0.42 mgd supply deficit during multiple dry-years in 2030, the SFPUC will implement their adopted drought planning sequence and associated operating procedures that trigger different levels of water delivery reduction rationing relative to the volume of water actually stored in SFPUC reservoirs. If the SFPUC determines the projected total water storage to be less than an identified level sufficient to provide sustained deliveries during drought, the SFPUC may impose delivery reductions or rationing. The WSAP and Retail Water Shortage Allocation Plan (RWSAP) allow the SFPUC to reduce water deliveries to customers during periods of water shortage to achieve a positive balance of supplies and demands. Under WSAP, the RWS supply curtailment in multiple dry years of 1.5 mgd to 79.5 mgd results in a 1.9 percent reduction. The SFPUC, as part of the WSIP, adopted a water reliability objective of no greater than 20 percent rationing in any one year of a drought.

Table V.L-4
Projected Supply and Demand Comparison – Normal, Dry, and Multiple Dry Years (mgd)

Year	Retail Supply and Demand	Normal Dry Year	Single Dry Year	Multiple Dry Year Event[2]		
				Year 1	Year 2	Year 3
2010[1]	RWS Supply[1]	81.00	81.00	81.00	81.00	81.00
	Groundwater Supply[2]	3.50	3.50	3.50	3.50	3.50
	Total Retail Supply[3]	84.50	84.50	84.50	84.50	84.50
	Total Retail Demand[4]	91.81	91.81	91.81	91.81	91.81
	Surplus/Deficit[5]	-7.31	-7.31	-7.31	-8.81	-8.81
2015	RWS Supply[1]	81.00	81.00	81.00	79.50	79.50
	Groundwater[6]	3.50	3.50	3.50	3.50	3.50
	WSIP Supply Sources[7]	10.00	10.00	10.00	10.00	10.00
	Total City Supply[3]	94.50	94.50	94.50	93.00	93.00
	Total Retail Demand[4]	91.69	91.69	91.69	91.69	91.69
	Surplus/Deficit	2.81	2.81	2.81	1.31	1.31
2020	RWS Supply[1]	81.00	81.00	81.00	79.50	79.50
	Groundwater[6]	3.50	3.50	3.50	3.50	3.50
	WSIP Supply Sources[7]	10.00	10.00	10.00	10.00	10.00

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[3] Multiple dry-year events are defined as a three-year event per UWMP requirements. SFPUC determined that a multiple dry-year event is years 2-4 of SFPUC's 8.5 year design drought. SFPUC can meet 100 percent of deliveries in the first year of such an event.

Table V.L-4
Projected Supply and Demand Comparison – Normal, Dry, and Multiple Dry Years (mgd)

Year	Retail Supply and Demand	Normal Dry Year	Single Dry Year	Multiple Dry Year Event[2]		
				Year 1	Year 2	Year 3
	Total City Supply[3]	94.50	94.50	94.50	93.00	93.00
	Total Retail Demand[4]	91.87	91.87	91.87	91.87	91.87
	Surplus/Deficit	2.63	2.63	2.63	1.13	1.13
2025	RWS Supply[1]	81.00	81.00	81.00	79.50	79.50
	Groundwater[6]	3.50	3.50	3.50	3.50	3.50
	WSIP Supply Sources[7]	10.00	10.00	10.00	10.00	10.00
	Total City Supply[3]	94.50	94.50	94.50	93.00	93.00
	Total Retail Demand[4]	92.36	92.36	92.36	92.36	92.36
	Surplus/Deficit	2.14	2.14	2.14	0.64	0.64
2030	RWS Supply[1]	81.00	81.00	81.00	79.50	79.50
	Groundwater[6]	3.50	3.50	3.50	3.50	3.50
	WSIP Supply Sources[7]	10.00	10.00	10.00	10.00	10.00
	Total City Supply[3]	94.50	94.50	94.50	93.00	93.00
	Total Retail Demand[4]	93.42	93.42	93.42	93.42	93.42
	Surplus/Deficit	1.08	1.08	1.08	-0.42[8]	-0.42[8]

Notes:

[1] *RWS Supply SFPUC Water Supplies Table 2-2*

[2] *Groundwater Uses for In-City Irrigation and Castlewood (Water Supplies Table 2-2)*

[3] *Total Retail Supply from SFPUC Water Supplies Table 2-2*

[4] *SFPUC Retail Demand from Table 5-6*

[5] *The deficit shown in 2010 is the result of reducing the RWS supply to 81 mgd as per the Phased WSIP Variant, without full development of the additional 10 mgd of new supplies. 10 mgd of new sources will be developed and available for use in SF by 2015. However, SF Retail demand is currently lower than projected (FY07/08 use was 83.9 mgd). If SF Retail demands exceed the available supply of 84.5 mgd between 2010 and 2015, the Water Supply Agreement allows the SFPUC to purchase additional water from the RWS. If combined Retail and wholesale deliveries exceed 265 mgd, the SFPUC Retail customers would be required to pay an Environmental Surcharge for deliveries over 81 mgd (Total RWS deliveries in FY07/08 were 256.7 mgd).*

[6] *Groundwater Supplies at Castlewood and In-City Irrigation (SFPUC Water Supplies Table 2-2)*

[7] *WSIP Supply Sources (Recycled Water (4.0 mgd; Groundwater (2.0 mgd Existing and 2.0 from NWGWP, and WSIP Water Efficiency and Conservation (4.0 mgd) (see SFPUC Water Supplies Table 2-2)*

[8] *Deficit occurs in year 2 and 3 of multiple dry year event, SFPUC implements its Drought Year Water Shortage Contingency Plans - RWSAP and WSAP to balance supply and demand under this projected shortfall as described in Section 4.0*

Source: SFPUC, Final Water Supply Availability Study for City and County of San Francisco, October 2009, at page 30.

Wastewater and Stormwater

Freshwater flow from the City to the Bay has been almost entirely diverted to the City's combined sewer and stormwater system using a networks of pipes over 900 miles long.[4] Wastewater includes water that is washed down drains and toilets in homes and businesses, as well as stormwater, and water that is poured into catch basins located at the end of each block in the City. San Francisco has close to 23,000 catch basins.[5] Figure V.L-1 illustrates the location of the components of the City's combined sewer system.

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[4] SFPUC, Wastewater Enterprise, website: http://sfwater.org/Dept.cfm/MO_ID/48, accessed April 5, 2009.

The City's wastewater composition is estimated to be 47 percent residential, 47 percent commercial, and 6 percent industrial, on average over the entire citywide system.[6] This combined sewer system reduces pollution in the San Francisco Bay Area and Pacific Ocean by treating urban runoff that would otherwise flow straight into the San Francisco Bay or Pacific Ocean. During dry weather, approximately 84 mgd of treated wastewater (effluent) is discharged from the combined sewer system to the San Francisco Bay through the South East Water Pollution Control Plant (SEWPCP) and to the Pacific Ocean through the Oceanside Water Pollution Control Plant (OWPCP). During wet weather, with additional wet weather facilities and operation, the plants can treat approximately 465 mgd prior to discharge, and wet weather flows in excess of this treatment capacity receive the equivalent of primary treatment prior to being discharged to the Bay and ocean through combined sewer overflow (CSO) structures located around the perimeter of the City. It is estimated that the City's wastewater system treats approximately 91 percent of San Francisco's stormwater runoff to the ocean or Bay.

The existing City sewer system is operational and all discharges, treatment plants, combined sewer discharges and outfalls are currently in frill compliance with permit requirements.[7] As such, the system is currently considered to be without deficiencies. However, the existing system is facing certain challenges, including 1) aging infrastructure (structural integrity and seismic reliability), 2) readiness for climate change (e.g. rising sea levels, changes in storm intensity and frequency), 3) operational efficiency related to changes in land use conditions, subsidence and reduction in pipe capacity, and 4) public nuisances and safety hazards related to flood and order control. Many elements of the system, though currently functional, are reaching the end of their useful life and will need to be replaced or repaired to maintain a high level of service.

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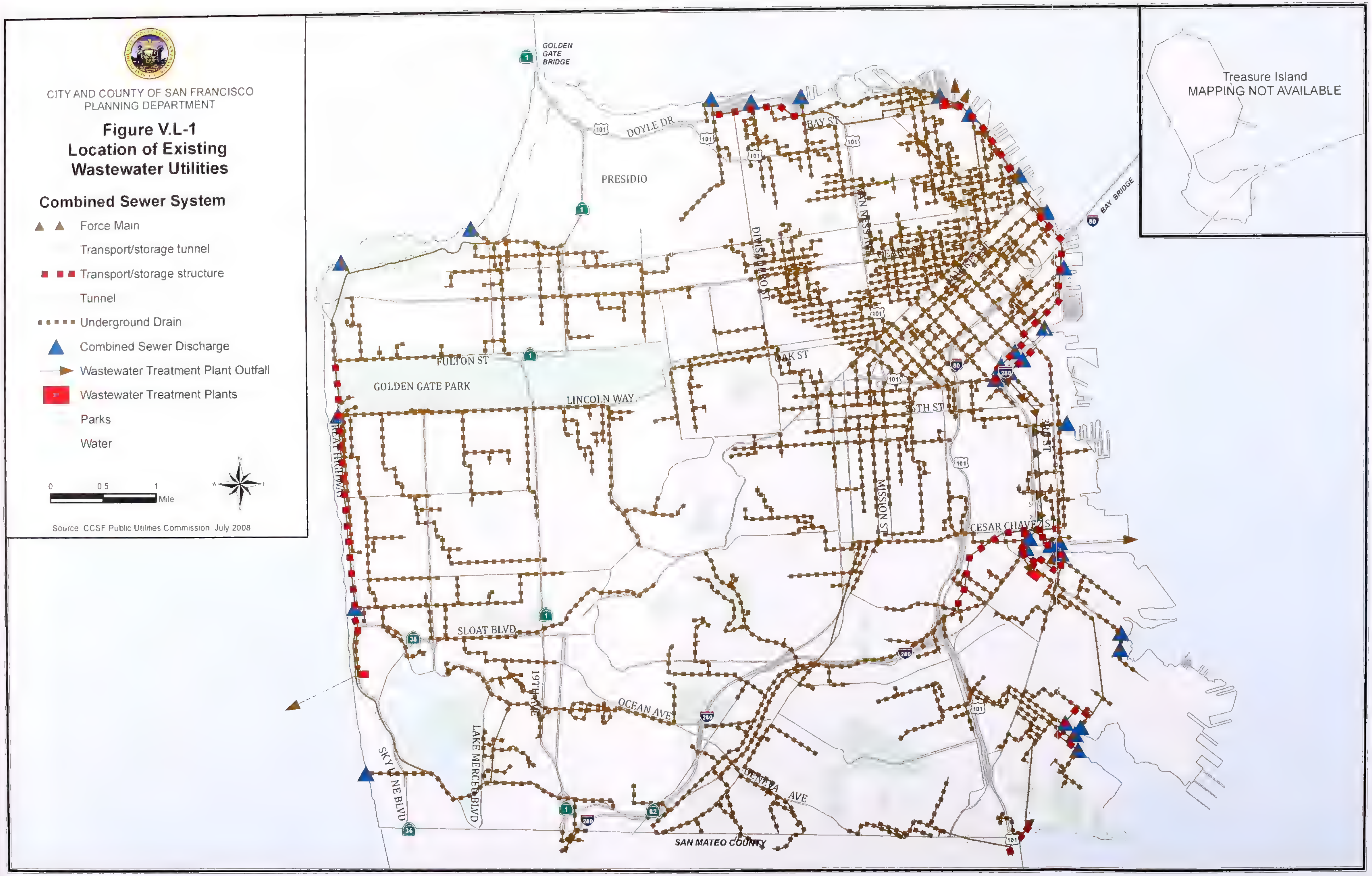
[5] SFPUC, Capturing and Storing Stormwater: Catch Basins and Storage Boxes, website: http://sfwater.org/mto_main.cfm/MC_ID/14/MSC_ID/117/MTO_ID/658#storage, accessed April 5, 2009.

[6] Balboa Park Station Area Plan, Adopted by the Board of Supervisors April 7, 2009 and signed by the Mayor April 17, 2009, at page 271. Original Source: San Francisco Public Utilities Commission, Wastewater System Reliability Assessment, Baseline Summary, Draft. December 2003. Prepared by SFPUC Water Pollution Control Division, San Francisco Department of Public Works, Bureau of Engineering, Hydraulic & Mechanical Sections, and The Water Infrastructure Partners.

[7] Marla Jurosek, Manager, SFPUC, response to service letter request, May 25, 2010.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

Figure V.L-1
Location of Existing Wastewater Utilities



Source: CCSF Public Utilities Commission, July 2008

To address these concerns, the SFPUC is currently developing a capital improvement plan, the Sewer System Improvement Program (SSIP). The SSIP will assess the current and future needs of sewer system of the City of San Francisco. Development of the SSIP was initiated in 2005, with public input (collected through meetings, home mailings, and the SFPUC website) central to its development. The SSIP will propose a long-term vision for improvement of the sewer system and for sustainable sewer system management. Specifically, it will propose the replacement of the sewers and related facilities, and make other recommendations to address the system challenges noted above.

Treatment Facilities

The combined sewer system can be divided into the Bayside and Westside drainage basins that collect wastewater and stormwater from the east and west sides of the City, respectively. The dividing line extends roughly from Fort Point on the north to the San Francisco Golf Course on the south, as determined by the design and operation of the sewer system that further divides the system into sub-drainage basins or "sewersheds." Wastewater flows from the entire east side of the City are transported to the SEWPCP located on Phelps Street near Third and Evans streets in the Bayview District. The OWPCP, located at 3500 Great Highway, adjacent to the San Francisco Zoo, treats wastewater from the western side of the City. The North Point Wet Weather Treatment Facility (NPWWTF), located on Bay Street, operates during wet weather to treat combined storm flows.

The SEWPCP was built in 1952 and expanded several times subsequently. The plant is located on Phelps Street near Evans Avenue in the Bayview District. The SEWPCP is an oxygen-activated sludge plant that provides secondary treatment for the wastewater from the east side of San Francisco (Bayside Watershed) plus some flow from other agencies. The Southeast Plant treats approximately 80 percent of the City's total wastewater flow. Treated wastewater is discharged out a 900-foot-long pipe from the SEWPCP into the San Francisco Bay. The SEWPCP has a current daily average dry-weather flow of approximately 67 mgd. During wet weather, the SEP wet- weather facilities can provide full secondary treatment for up to 150 mgd and primary treatment for an additional 100 mgd of combined wastewater flow for a total wet-weather flow rate of 250 mgd.

The NPWWTF is a primary treatment plant for wet-weather flows from the northeast portion of the Bayside Watershed. The North Point Facility has been in operation since 1951. It is located on Bay Street in lower Telegraph Hill and the North Waterfront. The facility provides primary-level treatment of wastewater collected in the north part of the City during rainstorms. Treated wastewater is discharged from the NPWWTF through a pipe 900 feet into the San Francisco Bay. The NPWWTF has a peak hourly treatment capacity of 150 mgd. On average it operates 30 times per year treating an annual average total flow of 0.7 billion gallons.

The OWPCP was built in 1993, and is located off Great Highway near the San Francisco Zoo, and serves the west side of the City. Treated wastewater is discharged from the Plant via a 4.5 mile pipeline in the Pacific Ocean. The Oceanside Wastewater Treatment Plant was designed for an average dry-weather flow of 21 mgd and currently treats approximately 16 mgd. It has a peak dry-weather flow capacity of 43 mgd and can treat up to 65 mgd during wet weather periods.

Storage and Transports

Storage/transports are huge underground rectangular tanks or tunnels that surround the City like a moat. During rainstorms, storage/transports prevent untreated shoreline discharges. Up to 193 million gallons of combined sewage and stormwater is stored in these facilities citywide for later treatment. Storage/transports have three functions: 1) Capture the runoff: at the City's perimeter, the storage/transports catch the combined stormwater and sewage; 2) Storage: storage/transports hold stormwater and sewage for later treatment; 3) Treatment: storage/transports provide treatment consisting of settling and removal of floatable materials prior to shoreline discharge when wastewater flow exceeds the system's total storage capacity.

Most rainstorms do not completely fill storage/transports and the wastewater is held for later treatment. The solids retained in storage/transports are flushed to the treatment plants after storms. When treatment plants are at full capacity and all storage elements are full and rain continues to fall, shoreline-treated discharges occur. The treated discharge is approximately 6 percent sewage and 94 percent stormwater. Treated discharges can occur from one to ten times per year, depending on location.

All discharges from the combined sewer system to the Bay, through either the outfalls or CSOs, are operated in compliance with the federal Clean Water Act and the State's Port-Cologne Water Quality Control Act through permits issued by the California Regional Water Quality Control Board, San Francisco Bay Region (SFBRWQCB).[8]

Pump Stations

Pump stations move the combined flows to treatment plants or to storage/transports. Every storm is different and pumping rates are adjusted to accommodate differing rainfall conditions and thus are able to achieve maximum use of available facilities.

Solid Waste

San Francisco generates about 5,600 tons of solid waste each day, including materials from residents and businesses. Less than one-third of this material, approximately 1,800 tons a day, is disposed of in landfills. Waste picked up in the City for disposal must be collected by permitted haulers. Norcal Waste Systems holds virtually all the permits in San Francisco, and collection is handled by two of Norcal Waste System's subsidiary companies, Recology Sunset Scavenger and Recology Golden Gate. These companies transport waste to a consolidation center, called a Transfer Station. Recycling and transfer services are provided by Recology San Francisco.[9] All waste taken to the Transfer Station (approximately 82 percent of all waste generated in the City) is transported to Waste Management's Altamont Landfill, located approximately 60 miles from San Francisco at 10840 Altamont Pass Road in Livermore. The landfill is owned and operated by Waste Management of Alameda County. The balance of the waste ends up in a number of other landfills in the region.[10]

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[8] Balboa Park Station Area Plan, Adopted by the Board of Supervisors April 7, 2009, at page 272. Original Source: Regional Water Quality Control Board, San Francisco Bay Region, Water Quality Control Plan for the San Francisco Bay Basin, December 22, 2006.

[9] John Glaub, Sunset Scavenger, response to service letter request, November 6, 2009.

The City entered into a long-term landfill disposal agreement effective November 1, 1988, with the Sanitary Fill Company (now SF Recycling & Disposal) and the Oakland Scavenger Company (now Waste Management of Alameda County). The agreement provides for the disposition of up to 15 million tons of the City's municipal solid waste in the Altamont Landfill or 65 years of disposal, whichever comes first. The remaining capacity in the disposal contract is approximately two million tons.[11] The City is in the process of contracting for 5 million tons of additional disposal capacity with another service provider for the period after conclusion of the Altamont contract.

Waste generation in the City has been climbing fairly steadily for the past ten years. During the past three years, waste generation has increased somewhat more slowly. What has changed even more dramatically over the past decade is landfill diversion, made possible by recycling and composting programs, which has leapt from less than 400,000 tons in 1995 to over 1.4 million tons in 2006. Total waste disposal for the City has been dropping since 2000, from 872,731 tons in 2000[12] to 594,732 tons in 2008,[13] while diversion has increased over the same period. Disposal at the Altamont landfill by SF Recycling & Disposal increased fairly consistently each year between 1995 and 2000, reaching a peak of 729,717 tons in 2000. Since then, disposal declined every year through 2005, when it dropped to 545,437 tons. In 2007, Altamont disposal dropped to 520,265 tons.[14]

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[10] City and County of San Francisco, Department of the Environment, "Request for Qualifications: Landfill Disposal Capacity", at page 1, website: www.sfgov.org/site/uploadedfiles/sfenvironment/meetings/coe/supporting/2008/RFQ.doc, accessed February 26, 2009.

[11] John Glaub, Sunset Scavenger, response to service letter request, November 6, 2009.

[12] Lindsey Riddell, "Two firms battle for S.F. landfill contract", San Francisco Business Times, July 3, 2009, website: http://sanfrancisco.bizjournals.com/sanfrancisco/stories/2009/07/06/story9.html, accessed January 26, 2010.

[13] California Integrated Waste Management Board, Jurisdiction Profile for San Francisco, website: http://www.ciwmb.ca.gov/profiles/Juris/JurProfile2.asp?RG=C&JURID=438&JUR=San+Francisco, accessed January 26, 2010.

[14] City and County of San Francisco, Department of the Environment, "Request for Qualifications: Landfill Disposal Capacity", at page 2, website: www.sfgov.org/site/uploadedfiles/sfenvironment/meetings/coe/supporting/2008/RFQ.doc, accessed February 26, 2009.

REGULATORY SETTING

Federal

Clean Water Act

The Clean Water Act assists in the development and implementation of waste treatment management plans and practices by requiring provisions for treatment of waste using the best practicable technology before there is any discharge of pollutants into receiving waters, as well as the confined disposal of pollution so that it would not migrate to result in water or other environmental pollution.

National Pollutant Discharge Elimination System

The Water Permits Division (WPD) within the EPA Office of Wastewater Management leads and manages the NPDES permit program which oversees stormwater management and sewer and sanitary sewer overflows.

Safe Drinking Water Act

The Federal Safe Drinking Water Act (SDWA) established standards for contaminants in drinking water supplies. Maximum contaminant levels or treatment techniques were established for each of the contaminants. The listed contaminants include metals, nitrates, asbestos, total dissolved solids, and microbes.

Federal Combined Sewer Overflow Control Policy

On April 11, 1994, the EPA adopted the Combined Sewer Overflow Control Policy, which became part of the Clean Water Act in December 2000. This policy establishes a consistent national approach for controlling discharges from combined sewers. Using the NPDES permit program, the policy initiates a two-phased process with higher priority given to more environmentally sensitive areas. During the first phase, the permitee is required to implement the controls that constitute the technology-based requirements of the Clean Water Act and can reduce the frequency of CSOs and their effects on receiving water quality.

The City is currently implementing these controls as required by the CSO control policy. This includes development of a Water Pollution Prevention Program which focuses on minimizing pollutants from entering the City's combined sewer system and addresses pollutants from residential, commercial, industrial, and non-point pollutant sources.

State

Department of Health Services

In California, water reclamation is regulated under Title 22 California Code of Regulations, Division 4, Section 60301 *et seq.* ("Title 22"), promulgated in 1978 by the Department of Health Services to assure protection of public health where water use is involved. Title 22 criteria include water quality standards, as well as treatment process, operational, and treatment reliability requirements. In addition, the State Water Resources Control Board has adopted Resolution No. 77-1, Policy with Respect to Water Reclamation in California. This policy states that the State Board and Regional Boards will consider and recommend for funding, water reclamation projects that do not impair water rights or beneficial instream uses. The Department of Health Services establishes the recycled water uses allowed in the State, and designates the level of treatment (i.e., un-disinfected secondary, disinfected secondary, or disinfected tertiary) required for each of these designated uses (Title 22, California Code of Regulations).

California Integrated Waste Management Act of 1989 (AB 939)

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. California Integrated Waste Management Board's (CIWMB) Department of Resources Recycling and Recovery (now CalRecycle) is the State department designated to oversee, manage, and track California's 92 million tons of waste generated each year. As of 2006, the most recent year for which Board-reviewed rates are available, the City achieved a diversion rate of 70 percent.[15]

Solid waste plans are prepared by each jurisdiction to explain how each city's AB 939 plan is integrated with its county plan. The plans must promote in order of priority: source reduction, recycling and composting, and finally, environmentally safe transformation, and land disposal.

California Solid Waste Reuse and Recycling Act of 1991 (AS 1327)

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327) was passed, requiring the CIWMB to develop a model ordinance for adoption by local agencies relating to adequate areas for collecting and loading of recyclable materials in development projects.

Regional

Water Quality Control Plan for the San Francisco Bay Basin

The SFBRWQCB regulates water quality in San Francisco Bay under the Porter-Cologne Water Quality Control Act through regulatory standards and objectives in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan identifies existing and potential beneficial uses and provides numerical and narrative water quality objectives to protect those uses. The Basin Plan identifies the following existing beneficial uses for the San Francisco Bay: ocean, commercial and sport fishing; estuarine habitat; industrial service apply; fish migration; navigation; preservation of rare and endangered species; water contact recreation; non-contact water recreation; shellfish harvesting; and wildlife habitat. Pollutants that have been identified as causing impairments in San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, furan compounds, mercury, exotic species, and PCBs. The law requires the development of total maximum daily loads (TMDLs) to identify the maximum concentration of particular pollutants that will impair water quality and to identify pollution prevention, control, or restoration strategies. The SFBRWQCB has developed TMDL reports for pollutants including PCBs and mercury, and has proposed Basin Plan amendments regarding TMDL.

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[15] CalRecycle, Jurisdiction Profile for City of San Francisco, website: http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile2.asp?RG=C&JURID=438&JUR=San+Francisco, accessed February 1, 2010.

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to utilities and service systems are discussed in Section V.A (Plans and Policies) of this Draft EIR. General Plan objectives and policies discussed in this Section are as follows:

Community Safety Element

Objective 10: Locate wastewater facilities in a manner that will enhance the effective and efficient treatment of storm and wastewater.

Objective 11: Locate solid waste facilities in a manner that will enhance the effective and efficient treatment of solid waste.

San Francisco Green Building Ordinance (SFGBO)

In 2008, the City adopted Chapter 13C (Green Building Requirements) into San Francisco Building Code. The purpose of the requirements is to promote the health, safety, and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the buildings within the City and by providing a healthy indoor environment. Upon full implementation of the SFGBO in 2012, residential development will be required to achieve the following minimum standards:

1. Small residential (four or fewer units) – 75 GreenPoints;
2. Mid-sized residential (five or more units less than 75 feet in height) – 75 GreenPoints; or
3. High-rise large residential – 75 GreenPoints or LEED® Silver.

The ordinance requires compliance with the applicable LEED® performance standards or GreenPoint Rated checklists (which applies mostly to residential buildings), LEED® for New Construction, Version 2.2, criteria Sustainable Sites (SS) credits SS6.1 and SS6.2 for stormwater management, as well as the

BMPs and Stormwater Design Guidelines of the SFPUC (1304C.0.3). Additionally, for high-rise residential buildings (1304C.1.3), new group B (Business) and M (Mercantile) occupancy buildings (1304C.2), and new large commercial buildings (1304C.2.2), water efficient landscaping (LEED® Water Efficiency (WE) credit WE1.1) and water conservation are required (LEED® WE3.2).

LEED® SS6.2 addresses stormwater management and has been adopted by the San Francisco Stormwater Design Guidelines for MS4s.[16] The stormwater management program seeks to reduce impervious cover, promote infiltration, and capture and treat 90 percent of the runoff from an average annual rainfall event (for semi-arid watersheds; in San Francisco, treatment of 90 percent is interpreted as treating runoff produced by a rain event generating 0.75 inches) using acceptable BMPs. In addition, BMPs used to treat runoff must be capable of removing 80 percent of the average annual post development total suspended solid load contained in stormwater runoff. The BMPs are considered to meet these criteria if (1) they are designed in accordance with standards and specifications from a state or local program that has adopted these performance standards, or (2) there are filed performance monitoring data that demonstrate compliance with the criteria. LEED® WE1.1 addresses water efficient landscaping. New construction that is required to comply with this credit must submit documentation verifying a minimum of 50 percent reduction in use of potable water for landscaping (compared to the mid-summer baseline case). LEED® WE3.2 addresses water use reduction. Permit applicants must submit documentation demonstrating achievement of a minimum 20 percent reduction in the use of potable water. Effective January 1, 2011, the required reduction in use of water is 30 percent (compared to the water use baseline calculated for the building [not including irrigation] after meeting the US EPA Energy Policy Act of 1992 requirements).

The ordinance also requires that new development provide adequate areas for recycling, composting, and trash storage. Collection and loading, including any chute systems, must be designed for equal convenience for all users to separate those three material streams, and must provide space to accommodate a sufficient quantity and type of containers to be compatible with current methods of collection.

Green Landscaping Ordinance

The San Francisco Green Landscaping Ordinance was adopted on April 22, 2010 and applies to new development projects and projects involving significant alternation. It requires landscaping of publicly visible areas and rights-of-way including front yards, parking lot perimeters, and pedestrian walkways, as well as screening of parking and vehicular use areas. The Green Landscaping Ordinance also requires compliance with San Francisco Administrative Code Chapter 63, which applies to property owners requesting a new irrigation water service meter with a landscape area of 1,000 square feet or larger. The goals of the Green Landscaping Ordinance include the following:

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[16] An MS4 is a conveyance or system of conveyances that is owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); not a combined sewer; and not part of a Publicly Owned Treatment Works (sewage treatment plant).

- Healthier and more plentiful plantings through screening, parking lot, and street tree controls;
- Increased permeability through front yard and parking lot controls;
- Encourage responsible water use through increasing "climate appropriate" plantings; and
- Improved screening by creating an ornamental fencing requirement and requiring screening for newly defined "vehicle use areas".[17]

Sewer System Master Plan

San Francisco's combined sewer system is overseen by a comprehensive master plan adopted approximately 40 years ago. The sewer system has operated well but aging infrastructure, funding constraints, and deferred maintenance have created the need for another long-term master plan. In 2005, the SFPUC initiated a new master plan to develop a long-term strategy for management of the City's wastewater and stormwater, to provide a detailed roadmap for improvements needed over the next few decades and to estimate funds to implement these improvements, to address specific challenges facing the system, and to maximize system reliability and flexibility. The SFPUC is currently in the draft planning stage and has recently begun environmental review of the plan, which is expected to take about two years.

Stormwater Management Ordinance

The Stormwater Management Ordinance (Ordinance No. 83-10) was approved by the SFPUC and effective as of May 22nd, 2010.[18] The Ordinance implements the City's Stormwater Design Guidelines (Guidelines), adopted by the SFPUC on January 12, 2010, and includes the following provisions:

- Establishment of regulatory authority in the San Francisco Public Works Code for the Port Executive Director or his/her designee for specific activities related to stormwater management;
- Detail as to which types of projects are required to comply with the Guidelines;
- Requirements relating to the submittal of a Stormwater Control Plan for projects that must comply with the Guidelines;

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[17] San Francisco Public Utilities Commission, For Landscapes, website: http://sfwater.org/mto_main.cfm/MC_ID/13/MSC_ID/168/MTO_ID/758, June 21, 2010.

[18] San Francisco Public Utilities Commission, Stormwater Design Guidelines, website: http://www.sfwater.org/mto_main.cfm/MC_ID/14/MSC_ID/361/MTO_ID/543, June 21, 2010.

- A summary of prohibited discharges to the SFPUC and Port stormwater collection systems;
- Detail regarding ongoing maintenance and inspection requirements for completed projects; and
- Provisions for enforcement and cost reimbursement for those projects which violate the Guidelines.[19]

Water Supply Availability Study

The San Francisco Planning Department and the San Francisco Redevelopment Agency are currently engaged in planning for various proposed land development projects throughout San Francisco that go beyond those future developments considered in the 2005 UWMP update. As a result of these new developments, the SFPUC concluded that its 2005 UWMP no longer accounted for every project requiring a Water Supply Assessment (WSA) within San Francisco. Therefore, during this interim period until the 2010 UWMP is prepared, any qualifying projects not accounted in the 2005 UWMP will require preparation of a WSA per Water Code Sections 10910 – 10915 that considers the SFPUC's current and projected water supplies when compared to projected demands associated with new growth not covered in the 2005 UWMP. The Water Supply Availability Study was developed as an interim period study and follows the format of a WSA. The Study captures the most current water supply planning and demand information, analyzes the various projected change in water demands associated with each qualifying project within San Francisco, evaluates overall supply and demand, assesses the sufficiency of supply, and prepares a conclusion based on the analysis. Information from the Water Supply Availability Study is presented in the Environmental Setting discussion provided previously in this section.

Urban Water Management Plan

In an effort to streamline the water supply planning process within the City, the SFPUC adopted a resolution in 2002 and 2006 to allow for all development projects requiring a WSA under Water Code Section 10910 et seq. to rely solely on the adopted Urban Water Management Plan (UWMP) without having to go through the process of preparing individual WSAs. In accordance with the California Water Code 10610, also known as the Urban Water Management Planning Act (Act) of 1984, the City adopted an Urban Water Management Plan (UWMP) in 2006. The Act states that the UWMP must be updated every five years to identify short-term and long-term water demand management in order to meet growing water demands during normal, dry and multiple dry years. The UWMP provides information about the City's responsibilities towards water supply and water recycling in the community including wastewater generation, collection, treatment, and disposal.

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[19] City and County of San Francisco, Stormwater Design Guidelines, website: http://www.ci.sf.ca.us/, June 21, 2010.

North Westside Basin Groundwater Management Plan

In April 2005, the SFPUC completed the Final Draft North Westside Basin Groundwater Management Plan, which identified opportunities for increasing groundwater production in San Francisco.

Water System Improvement Program

On October 30, 2008, SFPUC certified the Final Program EIR for the WSIP, a multiple year, system-wide capital improvements program. Many aspects of the WSIP are rooted in the 2000 Water Supply Master Plan and various water system vulnerability studies. The WSIP investigated the potential options of developing local water resources such as water recycling, groundwater, desalination and improved conservation to meet SFPUC purchase requests or demands.

San Francisco Public Works Code

Under Article 21 of the San Francisco Public Works Code, potable water shall not be used for soil compaction or dust control activities undertaken in conjunction with any construction or demolition project occurring within the boundaries of the City and County of San Francisco, unless permission is obtained from the City Water Department in accordance with Article 21 and all applicable Water Department policies and regulations. This provision is in response to California's drought condition. The Commission found that the use of high quality potable water for construction and demolition purposes in San Francisco is widespread and that the use of such water supplies is not necessary for many construction and demolition purposes. Non-potable water is available for such purposes from various sources, including wastewater reclamation facilities and permitted groundwater wells.

San Francisco Housing Code

The intent of Chapter 12A of the San Francisco Housing Code, also known as the Residential Water Conservation Ordinance, is to conserve existing water supplies by reducing the overall demand for water in residential buildings by requiring the installation of water conservation devices in all residential buildings, except for tourist hotels and motels, upon the occurrence of specific events such as when the building undergoes major improvements, when there is a meter conversion, when there is a condominium conversion, and when there is a transfer of title.

Recycled Water Master Plan

The SFPUC has developed the 2006 Recycled Water Master Plan to provide guidance for implementing recycled water projects in San Francisco. The Plan includes a citywide assessment of potential recycled water users. Recycled water use in the northeast and east side of San Francisco is being evaluated as part of the Sewer System Master Plan. The purpose of the Plan is to identify where and how San Francisco could most feasibly develop recycled water in the City and to provide a strategy for implementing the recycled water projects identified.

Ordinance No. 27-06

The City adopted an ordinance (No. 27-06) effective on July 1, 2006, that creates a mandatory program to maximize the recycling of mixed construction and demolition (C&D) debris. The Ordinance requires that mixed C&D debris must be transported off-site by a Registered Transporter and taken to a Registered Facility that can process and divert from landfill a minimum of 65 percent of the material generated from construction, demolition or remodeling projects. The SFGBO would require a 75 percent diversion of C&D material for some projects.

Mandatory Recycling and Composting Ordinance

Adopted in 2009, this ordinance amended the San Francisco Environment Code by adding Chapter 19, entitled "Mandatory Recycling and Composting Ordinance" and amending the San Francisco Public Works Code and the San Francisco Health Code. The purpose of the ordinance is to: 1) require all persons located in San Francisco to separate recyclables, compostables and landfilled trash and participate in recycling and composting programs; 2) provide enforcement mechanisms and penalties for violations; 3) ensure that all properties subscribe to refuse collection service; and 4) authorize a Department of Public Health inspection fee of $167 per hour.

Zero Waste Goal

The City has adopted goals of 75 percent landfill diversion by 2010 and zero waste by 2020.[20] Currently, San Francisco recovers 72 percent of the materials it discards. The City is well on its way to meeting its diversion goals. Ultimately, the City will need to look beyond recycling and composting to get to zero waste, including passing legislation to increase producer and consumer responsibility.

Administrative Bulletin (AB-088)

This Administrative Bulletin provides standards and procedures for local implementation of the California Solid Waste Reuse and Recycling Access Act of 1991, and the related adopted Model Ordinance, which require that local jurisdictions enforce regulations to assure than adequate areas for collecting and loading for recyclable materials are provided in development projects. Under these regulations, cities are mandated to enforce requirements for certain new development projects and building alterations as detailed in AB-088.

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[20] SF Environment, Zero Waste, website: http://www.sfenvironment.org/our_programs/overview.html?ssi=3. Accessed February 4, 2010.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements;
- Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Would not comply with federal, state, and local statutes and regulations related to solid waste.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how and where new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. The 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

As previously stated, according to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. As previously discussed, the City has adopted goals of 75 percent landfill diversion by 2010 and zero waste by 2020. San Francisco currently recovers 72 percent of the materials it discards. The City is well on its way to meeting its diversion goals. Ultimately, the City will need to look beyond recycling and composting to get to zero waste. In addition, the City has adopted Ordinance No. 27-06, Mandatory Recycling and Composting Ordinance, and AB-088. These regulations adopted by the City ensure it is exceeding the requirements of AB 939. Therefore, the 2004 Housing Element and 2009 Housing Element would have ***no impact*** related to compliance with solid waste statutes and regulations.

Impact UT-1: The proposed Housing Elements would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Less than Significant)

2004 Housing Element and 2009 Housing Element Analysis

The City requires NPDES permits, as administered by the SFBRWQCB, according to federal regulations for both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the United States. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. The 2004 Housing Element and 2009 Housing Element would not result in the construction of residential units, but would serve to guide how new residential development should occur. New construction would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Therefore, the proposed Housing Elements would not directly result in an exceedance of wastewater treatment requirements. Additionally, the NPDES Phase I and Phase II requirements would regulate discharge from construction sites. All new development would be required to comply with all applicable wastewater discharge requirements issued by the State Water Resources Control Board (SWRCB) and RWQCB.

The SFPUC is currently developing a Sewer System Master Plan to address anticipated infrastructure issues, to meet anticipated regulatory requirements, as well as to accommodate planned growth. Projections for sewer service demand were assessed to 2030 to determine future population, flows, and loads based on 1) population information provided by ABAG and accepted by the Planning Department; 2) flows projected by the SFPUC based on water usage within the city; and 3) flows projected by the outside agencies that are discharging into San Francisco's sewer system based on agreements made with the U.S. EPA during the grants programs of the 1970s and 1980s. Furthermore, new development would not exceed applicable wastewater treatment requirements of the RWQCB with respect to discharges to the sewer system or stormwater system within the City. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the exceedance of wastewater treatment requirements.

Impact UT-2: The proposed Housing Elements would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and would not result in a determination by the wastewater treatment provider that serves the project that it has inadequate capacity to serve the City's projected demand.

New construction could result in impacts related to water or wastewater treatment facilities if new housing would result in additional need for water or wastewater treatment in areas that do not have the available capacity to transport or process the additional water or wastewater. This could require the construction or expansion of water or wastewater treatment facilities. As discussed previously, the proposed Housing Elements do not propose new development. They are policy-level documents intended to guide how and where new residential development in the City should occur. For example, new housing could result in density changes or the introduction of residential uses in previously industrial or commercial areas, which could result in a need for different types and levels of water or wastewater treatment. Generally, residential uses use less water (and generate less wastewater) than industrial or commercial uses and single-family housing uses more water (and generates more wastewater) than multi-family housing. Therefore, it is likely that the conversion of industrial and commercial uses to residential uses and the construction of multi-family housing instead of single-family housing would reduce the demand on water or wastewater treatment facilities.

2004 Housing Element Analysis

The following 2004 Housing Element implementation measure could result in an increased demand on water or wastewater treatment facilities by promoting residential uses on undeveloped or underdeveloped sites.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to underutilized or undeveloped sites.	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. The City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

2004 Housing Element Implementation Measure 4.1.4 promotes housing on underutilized, vacant, surplus lands and on Brownfield sites. Residential uses on undeveloped or underdeveloped sites could result in an increased demand on water or wastewater treatment facilities.

The following 2004 Housing Element policies could reduce the 2004 Housing Element's effects on demand for water or wastewater treatment facilities or a determination that the wastewater treatment provider does not have adequate service capacity by promoting increased density, residential uses on previous commercial and industrial sites, locating houses in residential neighborhoods, ensuring adequate public services, and including energy efficient features in new housing.

Impact	**2004 Housing Element**	**Corresponding 1990 Residence Element Policy**
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.
Promote housing in established neighborhoods, which likely have adequate existing levels and types of wastewater treatment capacity.	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate infill housing on appropriate sites in established neighborhoods.
Ensure housing is provided with adequate public services, including water and wastewater treatment service.	Policy 11.2: Ensure housing is provided with adequate public improvements, services, and amenities.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
Including energy efficient features, such as low-flow toilets and faucets, in new housing could reduce the demand for water and wastewater treatment.	Policy 11.10: Include energy efficient features in new residential development and encourage weatherization in existing housing to reduce overall housing costs and the long-range cost of maintenance.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing cost.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas. The 2004 Housing Element also promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and

Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6).

Measures that encourage housing density could be partially achieved by the construction of multi-family housing, which uses less water than single-family housing. For example, multi-family housing may result in less landscaping area that requires irrigation. Single-family housing typically has both front and rear setbacks that are normally landscaped and require irrigation water for maintenance. Multi-family units may also have landscaped front and rear areas for open space, but typically less area per unit than single-family housing. Therefore, an increase in multi-family housing would reduce the need for new or expanded water and sew hookups.

As shown above, the 2004 Housing Element proposes policies (see Policy 1.2 and Implementation Measure 1.3.2) that promote housing construction in industrial and commercial areas to a greater extent than the 1990 Residence Element. 2004 Housing Element Policies 1.1 and 1.3 are essentially the same as their corresponding 1990 Residence Element policies and would not represent a policy shift. However, the implementation measures associated with 2004 Housing Element Policy 1.3 are area specific, including Implementation Measure 1.3.2, and could result in greater environmental impacts than the 1990 Residence Element. Zoning changes would require additional environmental review to study the effects of the proposed zoning changes for each of the area plans.

As shown above, the 2004 Housing Element proposes policies that promote housing in established residential neighborhoods and require energy efficient features to the same degree as the 1990 Residence Element. 2004 Housing Element Policies 1.4, 11.2, and 11.10 are essentially the same as their corresponding 1990 Residence Element policies and would not represent a policy shift. Development of new housing in established residential neighborhoods could also reduce the effects of new residential development on the potential for the wastewater treatment provider to have inadequate capacity by ensuring housing is located in areas where an adequate type and level of wastewater capacity service is likely to already exist. The inclusion of energy efficient features, such as low-flow toilets and faucets, in new housing could also reduce the 2004 Housing Element's effects on the potential need for new or altered water or wastewater treatment facilities by reducing the amount of water used, and therefore reducing the demand for water and wastewater treatment. Essentially both the 1990 Residence Element and 2004 Housing Element recognize the need for housing in established neighborhoods, the provision of adequate public services, and the inclusion of energy efficient features, and therefore do not represent a shift in policy.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to water and wastewater treatment would be offset by compliance with the previously discussed regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, Water Quality Protection Program, the City's Stormwater Management Plan, and the City's Construction Site Runoff Pollution Prevention Program requirements. The SFPUC's Recycled Water Master Plan would provide guidance for implementing recycled water projects, which would also reduce the need for water and wastewater treatment. Additional regulations that would reduce the demand of new development on water and wastewater facilities include compliance with the City's NPDES permits related to construction activities as administered by the SFBRWQCB and Article 4 of the Porter-Cologne Water Quality Act, compliance with the Combined Sewer Overflow Control Policy and TMDL standards as set forth by the Basin Plan. The City's Green Building Ordinance addresses stormwater management by seeking to reduce impervious cover, promote infiltration, and capture and treat 90 percent of the runoff from an average annual rainfall event using acceptable BMPs. Furthermore, the 2004 Housing Element does not represent a shift in policy with respect to the promotion of housing construction on undeveloped sites, recognizing the need for housing in established neighborhoods, the provision of adequate public services, and the inclusion of energy efficient features in housing. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for the construction or expansion of water or wastewater treatment facilities and the potential to result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the City's projected demand.

2009 Housing Element

The following 2009 Housing Element policies could result in an increased demand on water or wastewater treatment facilities by promoting the intensification of uses on undeveloped or underdeveloped sites.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
Promote new housing construction on undeveloped sites, potentially resulting in an increased demand for water and wastewater treatment of those sites due to the intensification of uses.	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 7.1: Create more housing opportunity sites for permanently affordable housing. Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Implementation Measure 3: All agencies subject to the Surplus Property Ordinance, San Francisco's Administrative Code sections 23A.9-11, shall annually report on the availability of surplus property to the Department of real estate and the Assessor's Office, for use by the MOH in the MOH's continuing evaluation of surplus land for suitability for affordable housing development potential. To the extent that land is not suitable for housing development, the City should sell surplus property and use the proceeds for affordable housing	

Impact	2009 Housing Element	Corresponding 1990 Residence Element
	development for homeless people consistent with the Surplus Property Ordinance.	
	Implementation Measure 4: MOH shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the SFPUC, SFUSD and MTA to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios

Impact	2009 Housing Element	Corresponding 1990 Residence Element
	areas, especially if it can increase the number of affordable units in multi-family structures.	[FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
	persons.	
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79: Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, 2009 Housing Element promotes development on undeveloped sites to a greater extent than the 1990 Residence Element by using stronger language and providing a list of opportunity sites, one of which is undeveloped. The 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). While the 2009 Housing Element contains a policy that advocates for family-sized housing units (Policy 4.1 and Implementation Measure 32), overall density increases from such policy would be speculative as less units would be accommodated within a given building envelope.

2009 Housing Element Policy 1.2 directs the City to use the current state of the economy as an opportunity to pursue available land for affordable housing, providing stronger direction than 1990

Residence Element Policies 7.1 and 1.1. 2009 Housing Element Implementation Measures 3 and 4 address ongoing programs that would continue irrespective of the 2009 Housing Element. Part I of the 2009 Housing Element lists opportunity sites on public lands where future housing might be possible. Most of these sites are already developed; however the Balboa reservoir site is undeveloped and the intensification of uses on this site could require additional sewer and water hookups, thereby increasing demand for water and wastewater treatment. would promote new housing construction on undeveloped sites to a greater extent than the 1990 Residence Element and could result in an increased demand on water or wastewater treatment facilities.

Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are three areas under which the 2009 Housing Element promotes greater density than the 1990 Residence Element. These include the following themes: increasing density near transit; construction of affordable housing; and development through the community planning process. The density-related 2009 Housing Element policies could potentially result in the construction of multi-family housing, which uses less water than single-family housing.

The following 2009 Housing Element policies could reduce the 2009 Housing Element's effects related to water or wastewater treatment facilities by identifying suitable housing sites, considering neighborhood service availability for new housing, ensuring sustainable water and wastewater infrastructure capacity, and encouraging water conservation measures for new housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
Increased density and housing construction near transit, potentially resulting in a reduced need for water or wastewater treatment.	Policy 1.5: Support new housing projects on sites that are located close to major transit lines.	Policy 1.4: Locate infill housing on appropriate sites in established neighborhoods.
	Policy 12.1: Promote new housing that is located in close proximity to transportation infrastructure, to promote transit use and environmentally sustainable patterns of movement.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	Policy 16.1: Encourage the balancing of regional employment growth with the development and growth of affordable housing in the region.
	Policy 13.3: Promote sustainable land use patterns that integrate land use and transportation to increase transit, pedestrian and bicycle trips.	
	IM 89: Planning and SFMTA shall coordinate housing development with the ongoing Transit Effectiveness Project.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element
Increased density and construction of affordable housing, potentially resulting in a reduced need for water or wastewater treatment.	Policy 1.2: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 7.1: Create more housing opportunity sites for permanently affordable housing. Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands
	Policy 1.7: Include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.7: Obtain assistance from office developments and higher educational institutions in meeting the housing demand they generate, particularly the need for affordable housing for lower income workers and students. Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing including commercial development.
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval process.	Policy 6.3: Improve the planning review and approval process and give priority to permanently affordable housing projects. Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
Increased density in certain planning areas, potentially resulting in a reduced need for water or wastewater treatment in these areas.	Policy 1.1: Plan for the full range of existing and projected housing needs in the City and County of San Francisco.	
	Policy 1.3: Continue community planning processes to plan for housing growth.	
	Policy 1.4: Through community planning processes, establish land use controls that support efficient use of land.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable.
Ensure sustainable water and sewer infrastructure and capacity is available to new housing.	Policy 12.3: Ensure new housing is sustainably supported by the City's public infrastructure systems.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
Encourage the use of "green" non-point source control devices to reduce and filter runoff from project sites and promote other water and wastewater reduction measures.	Policy 13.4: Promote the highest feasible level of "green" development in both private and municipally-supported housing.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.
Continued implementation of the City's Green Building Ordinance by the SFPUC.	Implementation Measure 92: The PUC will continue to implement conservation regulations and incentives such as the City's Green Building Ordinance and the Stormwater Design Guidelines.	
Continued implementation of the City's Green Building Ordinance and other incentive programs for green upgrades.	Implementation Measure 102: DBI, Planning and the Department of the Environment shall continue to implement the City's Green Building Ordinance; and the Department of the Environment, the PUC and DBI shall continue local and state incentive programs for green upgrades.	

As shown above, some policies in the 2009 Housing Element could promote density near transit, increased density for affordable housing projects, and increased density through the community planning process to a greater degree than the 1990 Residence Element. Therefore, the 2009 Housing Element promotes the construction of multi-family housing, which uses less water than single-family housing. An increase in multi-family housing would reduce the need for new or expanded water and sewer hookups. Overall, the 1990 Residence Element promotes increased density on a broader Citywide scale to a greater extent than the 2009 Housing Element. Because the 1990 Residence Element promotes increased density more generally throughout the City, the 1990 Residence Element has greater potential to encourage multi-family housing than the 2009 Housing Element. Therefore, the 2009 Housing Element could increase the demand on water and wastewater facilities more so than the 1990 Residence Element.

As shown above, both the 1990 Residence Element and the 2009 Housing Element recognize the need ensure the City has adequate water and wastewater service capacity for its existing and future residents. Planning for projected housing needs could reduce the 2009 Housing Element's effects on the potential need for new or altered wastewater treatment facilities by ensuring housing is placed in areas with proper water and sewer infrastructure and treatment service capacity. 2009 Housing Element Policy 12.3 is similar to 1990 Residence Element Policy 12.1, though it specifically ensures new housing is supported by sustainable sewer systems through the collection of connection and rate increases. Essentially both the 1990 Residence Element and 2009 Housing Element recognize the need for considering infrastructure planning when developing new housing, ensuring sustainable water and wastewater infrastructure capacity, and water conservation measures in housing, and therefore do not represent a shift in policy.

2009 Housing Element Policy 13.4 encourages "green" development, including energy efficient features, such as low-flow toilets and faucets. These features could reduce the 2009 Housing Element's effects on the potential need for new or altered water or wastewater treatment facilities by reducing the amount of water used, and therefore reducing the demand for water and the amount of wastewater generated. Policy 13.4 also calls for preservation of existing buildings, which represents an environmental benefit in terms of runoff filtration and wastewater reduction associated with demolition and new construction. The SFPUC, DBI, Planning Department, and Department of the Environment would continue to implement the SFGBO and other programs with or without 2009 Housing Element Implementation Measures 92 and 102; therefore, these implementation measures do not represent a substantial shift in policy from the 1990 Residence Element.

Potential impacts related to water and wastewater treatment would be offset by compliance with the previously discussed regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, Water Quality Protection Program, the City's Stormwater Management Plan, and the City's Construction Site Runoff Pollution Prevention Program requirements. The SFPUC's Recycled Water Master Plan would provide guidance for implementing recycled water projects, which would also reduce the need for water and wastewater treatment. Additional regulations that would reduce the demand of new development on water and wastewater facilities include compliance with the City's NPDES permits related to construction activities as administered by the SFBRWQCB and Article 4 of the Porter-Cologne Water Quality Act, compliance with the Combined Sewer Overflow Control Policy and TMDL standards as set forth by the Basin Plan. The SFGBO addresses stormwater management by seeking to reduce impervious cover, promote infiltration, and capture and treat 90 percent of the runoff from an average annual rainfall event using acceptable BMPs.

Although the 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed regulations. The policies promoted by the 2009 Housing Element do not represent a major shift in policy compared to the 1990 Residence Element such that significant impacts related to water/wastewater systems would occur. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for the construction or expansion of water or wastewater treatment facilities and the potential to result in a determination by the treatment provider that it has inadequate capacity to serve the City's projected demand.

Impact UT-3: The proposed Housing Elements would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)

New construction could result in impacts related to stormwater drainage facilities if new housing would result in demand in areas that do not have the available capacity to accommodate additional stormwater runoff, thereby requiring the construction or expansion of stormwater drainage facilities. For example, development of new housing could result in an increase in impervious surfaces, which could increase runoff into stormwater drainage facilities. In addition, new housing could result in the construction of residential uses on undeveloped sites, which would increase impervious surfaces and increasing stormwater runoff.

2004 Housing Element

As discussed under Impact UT-2, the 2004 Housing Element would promote housing construction on undeveloped sites to an extent similar to the 1990 Residence Element and would result in a similar increase in impervious surfaces and increased stormwater runoff. A key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. The following 2004 Housing Element policies could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of stormwater drainage facilities by discouraging demolition of existing housing units.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	Policy 5.5: Preserve landmark historic residential buildings.
	Implementation Measure 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	

As shown above, the 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.1, 3.3, and 3.6) to a degree similar to the 1990 Residence Element. The preservation of existing housing would result in a reduced potential to increase impervious surfaces on a specific site, thereby reducing the potential need for new or altered stormwater drainage facilities by reducing demolition and new construction, which could increase impervious surfaces (such as parking areas). Furthermore, as discussed under Impact UT-2, the 2004

Housing Element also contains Policies 1.4 and 11.2, which could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of stormwater drainage facilities by promoting housing in established residential neighborhoods where infrastructure is likely to already exist and ensuring that housing is provided with adequate public improvements, including stormwater drainage.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to stormwater facilities would be offset by compliance with the previously discussed regulations and plans, including the City's Stormwater Management Plan, the City's Construction Site Runoff Pollution Prevention Program requirements, the stormwater design requirement of the SFGBO, NPDES permits related to construction activities as administered by the SFBRWQCB and Article 4 of the Porter-Cologne Water Quality Act, and the Combined Sewer Overflow Control Policy. Compliance with the SFGBO would reduce the amount of impervious surfaces and treat 90 percent of stormwater. The SFPUC's Recycled Water Master Plan provides a strategy for implementing recycled water projects, which could also reduce the need for stormwater drainage by potentially capturing stormwater onsite. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for the construction or expansion of stormwater drainage facilities.

2009 Housing Element

As discussed under Impact UT-2, the 2009 Housing Element proposes policies (see Policy 1.2 and Implementation Measures 3 and 4) that promote development on undeveloped sites to a greater extent than the 1990 Residence Element. The intensification of uses on undeveloped sites could increase impervious surfaces, potentially creating more runoff and need for stormwater drainage facilities. Therefore, the 2004 Housing Element would promote housing construction on undeveloped sites to a greater extent than the 1990 Residence Element and could result in a slightly greater need for stormwater drainage facilities.

Similar to the 2004 Housing Element, major themes of the 2009 Housing Element include the preservation and maintenance of existing housing. The following 2009 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the 2009 Housing Element's effects on the potential need for the construction or expansion of stormwater drainage facilities by discouraging demolition and encouraging the preservation of existing housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and	Policy 2.3: Prevent the destruction or reduction of housing for parking.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
improve existing housing supply.	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

When taken as a whole, the 2009 Housing Element would have less of a potential to reduce impacts related to stormwater drainage facilities due to increased density than the 2004 Housing Element. Therefore, the 2009 Housing Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in more impervious surfaces and more stormwater connections.

As shown above, the 2009 Housing Element proposes policies (see Objective 2 and Policies 2.1, 2.2, 2.3, 2.4, and 2.5) that discourage demolition and encourage preservation of existing units to a similar extent when compared to the 1990 Residence Element. This could reduce the 2009 Housing Element's effects on the potential need for new or altered stormwater drainage facilities by limiting the creation of new impervious surfaces (such as parking areas). 2009 Housing Element Objective 2 and Policies 2.1, 2.2, 2.4, and 2.5 are essentially the same as their corresponding 1990 Residence Element policies and would not represent a shift in policy. 2009 Housing Element Policy 2.3 discourages the modification of housing for parking and would essentially maintain the status quo, resulting in no forseeable changes to the amount of impervious surface. Essentially both the 1990 Residence Element and 2009 Housing Element recognize the importance of maintaining the City's housing stock and therefore do not represent a shift in policy. As discussed under Impact UT-2, the 2009 Housing Element also contains Policy 12.3, which could reduce the 2009 Housing Element's effects on the potential need for stormwater drainage facilities by ensuring housing is sustainably supported by sewer system, which also function as stormwater drainage systems in the City.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to related to stormwater facilities would be offset by compliance with the previously discussed regulations, including the stormwater design requirement of the SFGBO and the Green Landscaping Ordinance. Compliance with the SFGBO would reduce the amount of impervious surfaces and treat 90 percent of stormwater. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for the construction or expansion of stormwater drainage facilities.

Impact UT-4: The proposed Housing Elements would have sufficient water supply available to serve the project from existing entitlements and resources and would not require new or expanded water supply resources or entitlements. (Less than Significant)

New construction could result in impacts related to water supply if new housing results in additional need for water beyond what is provided by existing entitlements and resources, thereby requiring new or expanded resources or entitlements. For example, increases in density would likely be accomplished through the construction of multi-family housing, which uses less water than single-family housing. Overall, demand for water would be the same under the proposed Housing Elements because they would not result in an increase in population. The proposed Housing Elements would accommodate population growth by increasing density and through other accommodations, while also ensuring that there is sufficient land available to meet future housing needs.

As previously discussed, the proposed Housing Elements are policy documents that provide direction for accommodating the need for new housing driven by population growth. To meet the City's share of the regional housing need, as established in the RHNA prepared by ABAG, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. The proposed Housing Elements would not result in the construction of residential units and would not result in an increase demand for water. Future population growth as predicted by

ABAG would increase water demand. As shown in Table V.L-4, if necessary, the water deficit in 2010 can be solved by the purchase of additional water with the payment of an Environmental Surcharge, which the SFPUC is allowed to do under the Water Supply Agreement. In addition, the SFPUC determined that beginning in 2015, with the WSAP and RWSAP in place, and the addition of local WSIP supplies, the SFPUC finds it has sufficient water available to serve its retail customers, including existing and planned future uses. The WSA does not take into account water efficiencies that will be required of new development through the SFGBO. The SFGBO requires water efficient landscaping and water conservation for new construction. The recently adopted Green Landscaping Ordinance would also help to reduce the amount of water used for landscaping.

2004 Housing Element Analysis

As discussed under Impact UT-2, the 2004 Housing Element proposes policies (see Policy 1.5 and Implementation Measure 4.1.4) that promote development on undeveloped sites to the same extent as the 1990 Residence Element. Measures that encourage the intensification of uses on underdeveloped or developed sites could increase water demand by increasing the number of water hookups. 2004 Housing Element Policy 1.5 does not represent a policy shift from 1990 Residence Element Policy 1.1. The City's soft site analysis is essentially the identification of the underutilized and vacant sites, which is the subject of 2004 Implementation Measure 4.1.4. A portion of 2004 Implementation Measure 4.1.4 is similar to 2004 Housing Element Implementation Measure 1.3.3 with respect to development of Brownfield sites, which is not viewed as a policy shift. Therefore, the 2004 Housing Element would promote housing construction on undeveloped sites to an extent similar to the 1990 Residence Element and would result in a similar water demand.

However, as discussed under Impact UT-2, the 2004 Housing Element also proposes policies that promote increased density (see Policies 1.7, 11.7, and 11.8 and Implementation Measure 1.3.1) to a greater degree than the 1990 Residence Element. Measures that encourage housing density could be partially achieved by decreasing the amount of new development overall because more people could be housed in a given building, which could reduce the number of required water hookups. In addition, measures that encourage housing density could be partially achieved by the construction of multi-family housing, which uses less water than single-family housing. 2004 Housing Element Policy 4.4 would grant parking requirement exemptions, a policy not included in 1990 Residence Element Policy 7.3, but which could increase buildable areas, thereby potentially increasing the number of units that can be accommodated on a given site. 2004 Housing Element Policy 11.6 could increase density through a Better Neighborhoods type of planning process, a policy not proposed by the 1990 Residence Element. Therefore, the 2004 Housing Element promotes increased density, and could therefore reduce the demand for water compared to the 1990 Residence Element.

Furthermore, as discussed under Impact UT-2, the 2004 Housing Element also proposes Policies 11.2 and 11.10, which could reduce the 2004 Housing Element's effects on the potential for inadequate water supply by ensuring housing is provided with adequate public services, including adequate water supply, and including energy efficient features, such as low-flow toilets and faucets, in new housing to reduce water demand. Although the 2004 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed federal, state, and local regulations, including the City's Green Building Ordinance, Article 21 of the San Francisco Public Works Code, and the Residential Water Conservation Ordinance. The 2004 Housing Element would not result in an increase in water demand beyond that assumed in the SFPUC's Water Supply Availability Study. The 2004 Housing Element does not promote policies that represent a shift in policy that would increase water use. In fact, policies that increase density could reduce Citywide water use more so than policies in the 1990 Residence Element that do not promote increased density to the extent of the 2004 Housing Element. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to new or expanded water supply resources or entitlements.

2009 Housing Element Analysis

Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process. The 2009 Housing Element Policy 1.2 and Implementation Measures 3 and 4, promote development on undeveloped sites to a greater extent than the 1990 Residence Element by using stronger language and providing a list of opportunity sites, one of which is undeveloped. Measures that encourage the intensification of uses on underdeveloped or developed sites could increase water demand by increasing the number of water hookups. Policy 1.3 directs the City to proactively identify opportunity sites for affordable housing, providing stronger direction than 1990 Residence Element Policies 7.1 and 1.1. Part I of the 2009 Housing Element lists opportunity sites on public lands where future housing might be possible. Most of these sites are already developed; however the Balboa reservoir site is undeveloped and the intensification of uses on this site would require additional water hookups and could increase water demand. Therefore, the 2009 Housing Element would promote housing construction on undeveloped sites to a greater extent than the 1990 Residence Element and could result in an incrementally increased demand for water.

Furthermore, as discussed under Impact UT-2, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. Some policies in the 2009 Housing Element could promote density near transit, increased density for affordable housing projects, and increased density through the community planning process to a greater degree than the 1990 Residence Element. Measures that encourage housing density could be partially achieved by decreasing the amount of new development overall because more people could be housed in a given building, which could reduce the number of required water hookups. In addition, measures that encourage housing density could be partially achieved by the construction of multi-family housing, which uses less water than single-family housing. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. When taken as a whole, the 2009 Housing Element would have less of a potential to result in reduced water demand due to a reduced number of water hookups and reduced focus on the construction of multi-family housing to accommodate increased density compared to the 2004 Housing Element. Therefore, the 2009 Housing

Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in an incrementally increased demand for water.

However, as discussed under Impact UT-2, the 2009 Housing Element also proposes a policy (see Policy 1.1) that could reduce the 2009 Housing Element's effects on the potential for inadequate water supply by ensuring new housing is adequately supported by infrastructure, including water. Essentially both the 1990 Residence Element and 2009 Housing Element (see Policies 12.2, 12.3, and 13.4) recognize the need for considering adequate infrastructure for new housing, ensuring sustainable water systems, and "green" water conservation measures in housing to reduce water demand, and therefore do not represent a shift in policy. The SFPUC, DBI, Planning Department, and Department of the Environment would continue to implement the SFGBO and other programs with or without 2009 Housing Element Implementation Measures 92 and 101; therefore, these implementation measures do not represent a substantial shift from the 1990 Residence Element. Although the 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed regulations. The 2009 Housing Element would not result in an increase in water demand beyond that assumed in the SFPUC's Water Supply Availability Study. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to new or expanded water supply resources or entitlements.

Impact UT-5: The proposed Housing Elements would not be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs. (Less than Significant)

New construction could result in impacts related to landfill capacity if new housing would result in increased demand for solid waste disposal that would not be able to be accommodated by an existing landfill with adequate capacity. For example, the proposed Housing Elements could promote changes to density, which could result in for the generation of different types and levels of solid waste generation. Proposed Housing Element policies that promote housing of certain types or in certain locations could change the composition of the City's solid waste stream.

Additional collection trucks and personnel could be required to provide services to new housing.[21] The development of new housing could also add further strain to space-constrained corporation yards and waste processing and recycling facilities. Additional trucks require additional space to park. At some increment of additional trucks, additional bays would be needed at vehicle maintenance facilities. The additional tonnage generated by new housing would increase throughput at waste processing and recycling facilities. At some increment of additional tonnage, additional processing lines would be needed at waste processing and recycling facilities. Ultimately, the impacts on solid waste services depend on the magnitude of increased demand on the system, which in turn depends on how much and what type of housing is added to the City. It may be noted that multi-family housing is significantly more challenging with regard to successful separation of recyclables and compostables than it is at single-family residences.

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[21] John Glaub, Sunset Scavenger, response to service letter request, November 6, 2009.

As a consequence, multi-family housing generally places greater demands on waste processing and recycling infrastructure.

2004 Housing Element Analysis

As discussed under Impact UT-2, the 2004 Housing Element proposes policies that promote increased density to a greater degree than the 1990 Residence Element. Construction associated with new housing could potentially result in inadequate waste, recycle, or compost collection service or inadequate landfill capacity because increased density or changes in land use patterns could increase waste stream separation challenges due to the promotion of higher density housing and increased waste generation expected from increased population growth. As discussed under Impact UT-3, and throughout this EIR, the 2004 Housing Element contains numerous policies that promote the preservation of existing housing units. Reduction in demolition would reduce the amount of construction demolition debris associated with new construction. As discussed under Impact UT-2, the 2004 Housing Element also contains Policies 1.4 and 11.2, which could reduce the 2004 Housing Element's effects on the potential for housing to be served by inadequate waste, recycle, or compost collection service or a landfill with inadequate capacity by promoting housing in established residential neighborhoods where adequate collection services already exist and ensuring that housing is provided with adequate public services, including solid waste collection service. Although the 2004 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed regulations, including the City's Green Building Ordinance, Ordinance No. 27-06, Mandatory Recycling and Composting Ordinance, and AB-088 (all of which contribute to the City's goal of zero waste by 2020). The 2004 Housing Element does not promote policies that represent a shift in policy that would increase solid waste generation. The increase in density proposed by the 2004 Housing Element would be offset by the Mandatory Recycling and Composting Ordinance and compliance with the SFGBO requirements for new development to have adequate open space for collection of recyclables, compostables, and waste. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to landfill capacity.

2009 Housing Element Analysis

As discussed under Impact UT-2, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. Some policies in the 2009 Housing Element could promote density near transit, increased density for affordable housing projects, and increased density through the community planning process to a greater degree than the 1990 Residence Element. Construction associated with new housing could potentially result in inadequate waste, recycle, or compost collection service or inadequate landfill capacity because increased density or changes in land use patterns could increase waste stream separation challenges due to the promotion of higher density housing and increased waste generation expected from increased population growth. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. When taken as a whole, the 2009 Housing Element would have less of a potential to result in increased solid waste generation due to the reduced focus on construction associated with new housing to accommodate increased density compared to the 2004

Housing Element. Therefore, the 2009 Housing Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in an incrementally decreased generation of solid waste.

The following 2009 Housing Element policy could reduce the 2009 Housing Element's effects on the potential need for inadequate landfill capacity promoting the preservation of existing housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Preservation of, improvements to and maintenance of existing housing would decrease demolition, which could potentially reduce construction debris.	Policy 2.4: Promote physical improvements and continued maintenance to existing units to ensure their long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. 5.1: Assure that existing housing is maintained in decent, safe sanitary condition at existing affordability levels. 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs.	10.1: Preserve affordability of existing affordable units. 3.5: Prohibit the conversion of rental housing to time share, corporate suite or hotel use.
	Policy 3.3: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	10.1: Preserve affordability of existing affordable units.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	5.4: Maintain and improve the existing supply of public housing. 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.
	IM 68: MOH shall continue to lead a citywide effort, in partnership with SFRA, SFHA, and other City agencies to prioritize and facilitate the preservation and redevelopment of the City's distressed public housing according to the recommendations of the HOPE SF task force.	

As shown above, both the 2009 Housing Element and the 1990 Residence Element recognize the need for the preservation of and improvements to existing housing. Reduction in demolition would reduce the amount of construction demolition debris associated with new construction. 2009 Housing Element Policies 2.4, 3.1, 3.3, and 9.3 are essentially the same as their corresponding 1990 Residence Element policies and would not represent a shift in policy. 2009 Implementation Measure 68 identifies an ongoing program within the City that would continue regardless of the 2009 Housing Element. As discussed under Impact UT-2, the 2009 Housing Element also proposes a policy (see Policy 1.1) that could reduce the 2009 Housing Element's effects on the potential for housing to be served by inadequate waste, recycle, or compost collection service or a landfill with inadequate capacity by planning for projected housing needs, including landfill capacity. Essentially both the 1990 Residence Element and 2009 Housing Element (see Policies 12.2 and 13.4) recognize the need for considering neighborhood service availability for new housing and "green" development, which could include the use of recycled construction materials and therefore do not represent a shift in policy. The SFPUC, DBI, Planning Department, and Department of the Environment would continue to implement the City's Green Building Ordinance and other programs with or without 2009 Housing Element Implementation Measures 92 and 101; therefore, these implementation measures do not represent a substantial shift from the 1990 Residence Element. Although the 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed regulations. The 2009 Housing Element does not promote policies that represent a shift in policy that would increase solid waste generation. The increase in density near transit, for affordable housing projects, and through the community planning process proposed by the 2009 Housing Element would be offset by the Mandatory Recycling and Composting Ordinance. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to landfill capacity.

Cumulative Impacts

The geographic context for cumulative wastewater and water service impacts is SFPUC's service area. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the City resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development, which ABAG projects to be 390,573 households within the City by 2025, could contribute to impacts related to wastewater and water. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing Elements. The proposed Housing Elements merely guide new residential construction with an emphasis on affordability. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans that are intended to reduce impacts related to wastewater and water. The 2004 Housing Element and 2009 Housing Element policies would not directly or indirectly affect wastewater and water. New development could affect such water supply and wastewater treatment capacity, but would be evaluated on a project-by-project basis. In addition, the 2004 Housing Element and 2009 Housing Element are public policy documents and would not result in direct significant impacts. The policies of the proposed Housing Elements would not increase water use and wastewater generation; in fact, many policies have the potential to decrease water use and wastewater generation by emphasizing increased density and/or water conservation. Overall, under 2025 cumulative conditions, the 2004 Housing Element could decrease water use and wastewater requirements. On the other hand, the 2009 Housing Element does not emphasize overall density in the City to the same extent as the 1990 Residence Element and does not have the same potential as the 2004 Housing Element to decrease water use and wastewater requirements.

As described previously, the SFBRWQCB develops and enforces water quality objectives and implementation plans that safeguard the quality of water resources in its region. All new development would be required to comply with all applicable wastewater treatment requirements of the SFBRWQCB. Therefore, the cumulative impact of new development in combination with the proposed Housing Elements would have a ***less than significant*** impact related to the exceedance of wastewater treatment requirements of the SFBRWQCB.

Cumulative growth by 2025 in the SFPUC's service area could result in the need for additional wastewater conveyance infrastructure, which could result in significant cumulative impacts depending upon the nature and extent of the proposed improvements. However, any project connecting to the sewer system would be required to pay connection fees in accordance with existing regulations. Furthermore, cumulative growth from new construction would have fewer impacts due to stormwater design and treatment requirements under the SFGBO. Existing regulations ensure that all users pay their fair share for any necessary expansion of the system, including any expansion to wastewater treatment facilities. Therefore, this cumulative impact would be ***less than significant***. Projects would be required to meet all City requirements, which would identify any further infrastructure necessary for the development. Any recommended infrastructure would be designed in accordance with the SFPUC's standards. Therefore, the proposed Housing Elements would not result in a cumulatively considerable contribution to an impact on wastewater infrastructure. The cumulative impact of the proposed Housing Elements would be ***less than significant*** with respect to wastewater infrastructure.

As previously discussed, an update to the Sewer System Master Plan currently in the draft planning stage and is expected to use ABAG population projections for planning purposes. The proposed Housing Elements would be within ABAG's growth forecast and, as previously discussed, the existing wastewater treatment plants are currently operating below their design capacity. Therefore, it is anticipated that cumulative development would not exceed the capacity of the wastewater treatment system. This cumulative impact related to wastewater treatment capacity would be ***less than significant***. The City would continue to implement water conservation measures that would result in a decrease in wastewater generation, and each of the wastewater treatment plants would still have excess capacity. Therefore, the proposed Housing Elements would not result in a cumulatively considerable contribution to an impact on wastewater treatment facilities. The cumulative impact of the proposed Housing Elements would be ***less than significant*** with respect to wastewater treatment.

Cumulative growth in the SFPUC's service area could result in the need for additional water conveyance infrastructure, which could result in significant cumulative impacts depending upon the nature and extent of the proposed improvements. However, any project connecting to the water system would be required to pay connection fees in accordance with existing regulations. Existing regulations ensure that all users pay their fair share for any necessary expansion of the system, including expansion to water treatment facilities. Therefore, this cumulative impact related to water conveyance infrastructure would be ***less than significant***. Further, new development projects would be required to meet all City requirements, which would identify any further infrastructure necessary for the development. Any recommended infrastructure would be designed in accordance with the SFPUC's standards. Therefore, the proposed Housing Elements would not result in a cumulatively considerable contribution to an impact on water infrastructure. The cumulative impact of the proposed Housing Elements would be ***less than significant*** with respect to water infrastructure.

The SFPUC incorporates regional projections to calculate future growth.[22] Projections from the ABAG's 2009 Projections are used as a guideline to approximate what the long-term growth rates will be for the SFPUC. The proposed Housing Elements, which seek to meet the RHNA projections, would be within ABAG's growth forecast. In addition, an overall increase in wastewater generation is not anticipated. It is, however, anticipated that future cumulative development would not exceed the capacity of the water treatment system. Therefore, this cumulative impact related to water treatment capacity would be ***less than significant***. The City would continue to implement water conservation measures that would result in a decrease in water demand, and each of the water treatment plants would still have excess capacity. Therefore, the proposed Housing Elements would not result in a cumulatively considerable contribution to an impact on water treatment. The cumulative impact of the proposed Housing Elements would be ***less than significant*** with respect to water treatment.

Although all water providers are required to prepare plans to ensure that adequate water supplies exist for future growth, there is ongoing controversy surrounding the State's water supply and distribution efforts. SFPUC, the City's provider of water, has indicated it can accommodate existing and future demand through 2030. Any deficiency before 2015 can be solved by the purchase of additional water with the payment of an Environmental Surcharge, which the SFPUC is allowed to do under the Water Supply Agreement. Finally, new development would be required to comply with Section 10910 of the California Water Code. In addition, compliance with the SFGBO and water conservation ordinances would reduce water use by new and existing development. This cumulative impact related to water supply would be ***less than significant***. The implementation of conservation measures would be required on a project-specific basis and water shortage contingency plans would further reduce additional water demand. Therefore, the proposed Housing Elements would not result in a cumulatively considerable contribution to an impact on water supply because they would not result in population increases and would potentially decrease water use by emphasizing increased density as opposed to single-family housing. Furthermore, new construction would be required to comply with SFGBO and water conservation ordinances, reducing water use within new and existing residential development. The cumulative impact of the proposed Housing Elements would be ***less than significant*** with respect to water supply.

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[22] Ibid., at page 6.

The geographic context for the analysis of cumulative impacts related to solid waste would be the service area of Recology Sunset Scavenger and Recology Golden Gate. New development would generate additional generation of solid waste, depending on net increases in population, square footage, and intensification of uses. Cumulative new development and population growth would contribute to the overall regional generation of solid waste. Cumulative growth in the service area of Recology Sunset Scavenger and Recology Golden Gate could result in the need for additional landfill capacity. Despite the previously discussed anticipated sufficient capacity of Altamont Landfill, any existing capacity that currently exists within the landfill's service boundary is finite. Thus, it is considered that, without approved specific plans for substantial expansion of the landfill facilities that serve the County, solid waste generation from approved and foreseeable cumulative projects in the City would exacerbate regional landfill capacity issues in the future. That is, any additional solid waste incrementally added to existing facilities will decrease the amount of time until they reach capacity. Implementation of source reduction measures would be required on a project-specific basis and plans such as those for recycling would partially address landfill capacity issues by diverting additional solid waste at the source of generation. However, because of the issues discussed above, development associated with cumulative projects within and around the City would be cumulatively considerable. Although the proposed Housing Elements would have a ***less than significant*** contribution to this effect, impacts of future growth would be significant and unavoidable with respect to landfill capacity.

As previously stated, according to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. The policies of the proposed Housing Elements would not increase solid waste generation; in fact, they have the potential to decrease solid waste generation by emphasizing increased density and the preservation of existing housing. As previously discussed, the City has adopted goals of 75 percent landfill diversion by 2010 and zero waste by 2020. San Francisco currently recovers 72 percent of the materials it discards. The City is well on its way to meeting its diversion goals. In addition, the City has adopted Ordinance No. 27-06, Mandatory Recycling and Composting Ordinance, and AB-088. These regulations adopted by the City ensure it is exceeding the requirements of AB 939. Therefore, the proposed Housing Elements would have ***no cumulative impact*** with respect to solid waste regulations.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvements measures are warranted by the proposed Housing Elements.

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V. ENVIRONMENTAL SETTING AND IMPACTS
M. PUBLIC SERVICES

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to service ratios, response times, and performance objectives for public services including fire protection, police protection, schools, libraries, and public health facilities. Park services are discussed in Section V.K (Recreation). Responses from service providers are included in Appendix H to this EIR.

ENVIRONMENTAL SETTING

Fire Protection

The San Francisco Fire Department (SFFD) serves an estimated 1.5 million people.[1] These services include fire suppression, advanced emergency medical treatment and transport, heavy rescue, fire prevention and investigation, and community education and emergency preparedness training. According to the San Francisco Annual Report FY 05-06 (the most recent report available), the SFFD is made up of 1,675 uniformed and 66 civilian personnel.[2] The City's population in 2006 consisted of 806,210 persons.[3] Therefore, the ratio of uniformed fire personnel to residents during that time was 2.08 to 1,000 persons.[4] The SFFD is divided into several divisions that provide public services, which are described in Table V.M-1.

Table V.M-1
Divisions within the San Francisco Fire Department

Division	Jurisdiction	Additional Information
Division 2	Downtown and Financial Districts, extending through the northwestern boundaries of the City.	Includes majority of the City's high-rise buildings, schools, hospitals, churches, community centers, commerce, historical landmarks, underground transportation systems, tunnels, and bridges. Densely populated.
Division 3	South of Market area, extending through the southwestern boundaries and up to the southern border of the	Residential and commercial buildings, underground construction, wood-frame residential structures in densely populated

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[1] San Francisco Fire Department (SFFD), About Us, website: http://www.sf-fire.org/index.aspx?page=9, accessed January 26, 2010.

[2] SFFD, FY 2005-2006 Annual Report, at page 8. (A more recent annual report does not appear to be available.)

[3] California Department of Finance, California County Population Estimates and Components of Change by Year — July 1, 2000–2007, website: http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Estimates/E2/E-2_2000-07.php, accessed January 26, 2010.

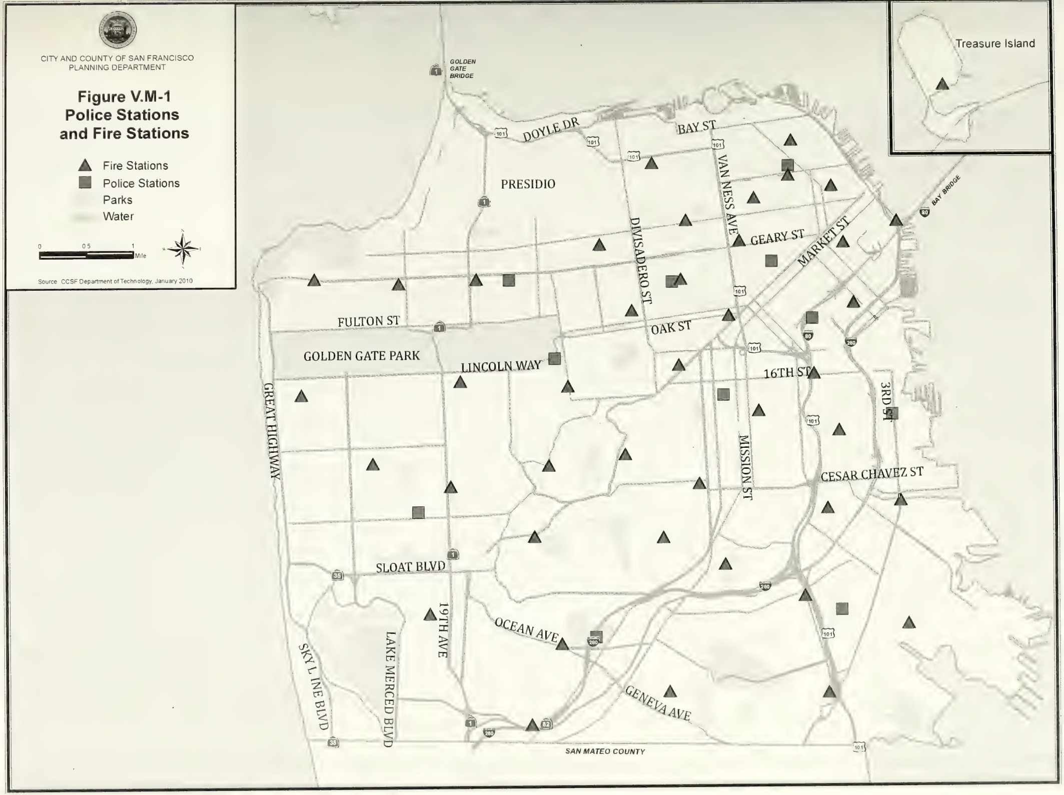
[4] SFFD, FY 2005-20006 Annual Report, at page 9.

Table V.M-1
Divisions within the San Francisco Fire Department

Division	Jurisdiction	Additional Information
	City. San Francisco International Airport, Treasure Island/Yerba Buena Island and the Hunter's Point Naval Shipyard. Public Transportation maintenance and repair yards and an extended area of port facilities.	neighborhoods such as the Mission district, and the only heavy concentration of industrial occupancies found in the city.
Emergency Medical Services	Countywide. Basic Life Support, Advanced Life Support, First Responder, EMT and paramedic programs.	In FY 2005-2006, SFFD responded to over 76,678 EMS and EMS-related incidents, 60,296 of which resulted in hospital transports by ambulance.
Airport Division	San Francisco International Airport (SFIA) community. Fire protection, water rescue, fire prevention, code enforcement, emergency medical services, hazardous materials abatement, community-based fire safety, CPR, and Automatic External Defibrillator (AED) services and training.	More than half a million passengers move through SFIA every week and are serviced by three fire stations.
Division of Fire Prevention and Investigation	Countywide.	Inspection of buildings and premises to ascertain and correct any conditions that have the potential to cause fire or contribute to a fire's spread.
Port Fire Marshal	Seven and 1/2 miles of waterfront jurisdiction.	Construction and referral inspections, plan review, technical conferences, pier and structural surveys, and issuance of permits.
Bureau of Fire Investigation	Countywide. Incendiary Vehicle Fire Program, the Arson Early Warning System, and the Juvenile Fire Setting Program.	Investigation of the cause, origin and circumstances of a fire, including whether the fire was accidental or criminal in nature.
Emergency Communications Department	9-1-1 operations and public safety dispatch services to San Francisco residents and visitors.	-
Division of Homeland Security	Countywide. Homeland Security and Disaster response program.	-

Source: SFFD, FY 2005-20006 Annual Report, at pages 11-22.

Figure V.M-1 shows the location of fire stations within the City. Resources for the SFFD include 42 engine companies, 19 truck companies, two rescue squads, and one fire boat, as shown in Table V.M-2. In 2006, the SFFD conducted a total of 43,356 responses and had an average response time of three minutes and 23 seconds. The SFFD has a dynamically deployed ambulance system. Ambulances are staffed to meet demand in the City and the total number of ambulances varies throughout the day. The goal for transport units for a code 3, which is a potentially life threatening incident, is to arrive on scene from the time of dispatch in ten minutes. On average, the transport units meet the desired performance standard with the exception of Station 48. Station 48, located on Treasure Island, has an average response time of almost twelve minutes, which slightly exceeds the ten minute goal.



CITY AND COUNTY OF SAN FRANCISCO
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Figure V.M-1
Police Stations
and Fire Stations

Source CCSF Department of Technology, January 2010

Table V.M-2
San Francisco Fire Department Staffing and Equipment

Station Area	Total Number of Responses	Firefighting Average Response Time	Ambulance Average Response Time	Staffing						
				Engine	Truck	Rescue Squad	Battalion Chief	Division Chief	Rescue Captain	Fire Boat
Citywide	43,356	0:03:23	00520							
1	6,875	0:03:20	00420	1:3	1:4	1:3				
2	709	0:03:05	00522	1:3	1:4		1			
3	4,239	0:03:04	00413	1:3	1:4					
5	1,363	0:02:46	00524	1:3	1:4			1		
6	1,466	0:02:56	00430	1:3	1:4					
7	2,561	0:03:04	00430	1:3	1:4	1:3		1		
8	1,297	0:03:32	00519	1:3	1:4		1			
9	396	0:03:39	00539	1:3	1:4		1			
10	808	0:03:22	00517	1:3	1:4					
11	976	0:03:04	00440	1:3	1:4		1		1	
12	634	0:03:17	00546	1:3	1:4					
13	1,089	0:03:15	00521	1:3	1:4				1	
14	562	0:03:19	00621	1:3	1:4					
15	789	0:03:33	00533	1:3	1:4		1			
16	688	0:03:23	00549	1:3	1:4					
17	1,317	0:03:33	00542	1:3	1:4					
18	640	0:04:08	00654	1:3	1:4					
19	677	0:04:15	00645	1:3	1:4					
20	200	0:03:50	00705	1:3						
21	922	0:03:04	00531	1:3			1			
22	656	0:03:31	00542	1:3						
23	506	0:03:41	00726	1:3						
24	217	0:03:52	00617	1:3						
25	376	0:03:42	00541	1:3						
26	289	0:04:02	00729	1:3						

Table V.M-2
San Francisco Fire Department Staffing and Equipment

Station Area	Total Number of Responses	Firefighting Average Response Time	Ambulance Average Response Time	Staffing						
				Engine	Truck	Rescue Squad	Battalion Chief	Division Chief	Rescue Captain	Fire Boat
28	971	0:03:21	00605	1:3						
29	549	0:03:14	00513	1:3						
31	808	0:03:21	00522	1:3			1		1	
32	778	0:03:55	00643	1:3						
33	822	0:04:01	00720	1:3						
34	469	0:03:49	00730	1:3						
35	518	0:03:50	00531	1:3						1
36	2,240	0:03:18	00433	1:3			1			
37	404	0:03:14	00603	1:3						
38	778	0:03:04	00501	1:3			1			
39	341	0:03:52	00644	1:3						
40	529	0:03:28	00558	1:3			1			
41	1,022	0:02:54	00418	1:3						
42	733	0:03:42	00659	1:3						
43	1,184	0:03:50	00706	1:3					1	
44	647	0:04:27	00800	1:3						
48	195	0:04:45	01152	1:3	1:4					

Notes:

* *These totals are for the time period of November 9, 2008 through November 9, 2009.*
** *1:3 signifies one officer and 3 firefighters per shift (engines).*
*** *1:4 signifies one officer and 4 firefighters per shift (trucks).*

Source: Barbara Shultheis, Fire Marshal, SFFD, response to service letter request, November 9, 2009.

Current SFFD expansion plans include the construction of three new fire facilities within the next ten years: Hunter's Point station, Mission Bay station, and Yerba Buena Island station.[5]

Police Protection

The San Francisco Police Department (SFPD) is divided into four bureaus: Administration, Airport, Field Operations, and Investigations. As of 2007, the officers in the patrol division consisted of 1,165 members.[6] As of January 2008, the City's population consists of 824,525 persons.[7] Therefore, the ratio of field officers to population is approximately 1.41 officers per 1,000 residents. The current nationally-accepted standard service ratio is 1.25 officers per 1,000 residents, and the California standard ranges from 1.4 to 1.7 per 1,000 residents.

In 2006, officers responded to approximately 1.1 million calls for service and arrested over 32,000 suspects.[8] Calls for services are categorized as Priority A, B, and C, with Priority A calls the most urgent and Priority C calls taking the least precedent. The SFPD's response time goals are four minutes for Priority A calls, 7.5 minutes for Priority B calls, and 10 minutes for Priority C calls.[9] In 2007, the average response time for highest priority calls, such as reports of homicide, robbery, or crimes involving weapons, was 4.36 minutes.[10] The average response time for second priority and third priority calls was 8.02 and 11.37 minutes, respectively.[11] Response times have remained largely consistent since 2002. Table V.M-3 shows average police response time citywide and within individual districts between January 1, 2010 and January 16, 2010. As shown, the City's average response time for Priority C calls, and certain average response times in the Central, Bayview, Park, Richmond, Ingleside, and Taraval Districts exceed the SFPD's response time goals.

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[5] Barbara Shultheis, Fire Marshal, SFFD, response to service letter request, November 9, 2009.

[6] San Francisco Police Department (SFPD), District Station Boundaries Analysis, May 13, 2008, at page 45, website: http://sf-police.org/Modules/ShowDocument.aspx?documentid=14683, accessed January 26, 2010.

[7] California Department of Finance, City/County Population Estimates with Annual Percent Change, website: http://www.dof.ca.gov/research/demographic/reports/estimates/e-1_2006-07/documents/E-1table.xls, accessed April 2, 2009.

[8] SFPD, 2006 Annual Report, at pages 94 and 95, website: http://sf-police.org/Modules/ShowDocument.aspx?documentid=14900, accessed January 26, 2010. (The SFPD prepared a 2007 Annual Report, but it does not include citywide totals for calls and suspects.)

[9] Crime Analysis Unit of COMPSTAT Division, response to service Letter request, January 25, 2010.

[10] SFPD, District Station Boundaries Analysis, May 13, 2008, at pages 43-44, website: http://sf-police.org/Modules/ShowDocument.aspx?documentid=14683, April 2, 2009.

[11] Id.

Table V.M-3
San Francisco Police Department Response Times (1/1/10-1/16/10)

	A Priority	B Priority	C Priority
City			
City	03:35	07:19	**10:30**
Districts			
Central	03:40	**07:58**	08:43
Southern	03:32	07:46	09:50
Bayview	03:29	**09:10**	**13:42**
Mission	03:11	06:27	08:56
Northern	03:50	06:19	08:39
Park	**04:09**	06:11	07:50
Richmond	03:36	05:41	**11:10**
Ingleside	03:38	**08:20**	**12:07**
Taraval	**04:30**	07:12	**10:50**
Tenderloin	02:34	07:22	06:07

Note: Bold response times represent exceedances of the SFPD's goals.
Source:
Crime Analysis Unit of COMPSTAT Division, response to service Letter request, January 25, 2010.

Figure V.M-1 shows the location of police stations within the City. The major divisions of the SFPD are the Investigations Bureau and the Field Operations Bureau. The Field Operations Bureau consists of ten districts; a majority of these districts contain some portion of the project area. The Investigations Bureau is responsible for investigating and documenting personal and property crimes; preparing cases for prosecution by the District Attorney's Office; carrying out the functions of the Special Investigations Bureau, Gang Task Force, Narcotics and Vice Division, Juvenile and Family Services Division, and Forensic Services Division; and working with federal, state and local agencies on multi-jurisdictional investigations.

In a May 2008 letter to Mayor Gavin Newsom regarding police effectiveness, the City Controller highlighted the immediate need for two new police stations, the need for new strategies to address the long-standing crime concentration in the northeastern portions of the City, and the desire of police staff and community residents for additional police presence in the districts and on patrol.[12] Major issues for the stations include that they are at capacity or too small for the number of officers assigned, storage is lacking, locker rooms are inadequate, and technology is outdated or nonexistent.[13] Two of the district stations are not seismically sound and need to be replaced in the near future.[14] Security issues regarding police parking, juvenile detention, and entry areas are of concern for most or all stations.[15]

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[12] Letter from City Controller to Mayor Gavin Newsom, May 13, 2008, website: http://www.sfgov.org/site/uploadedfiles/police/information/SFPD_DSBAfinal_trnsmtl.pdf, accessed April 2, 2009.

[13] SFPD, District Station Boundaries Analysis, May 13, 2008, at page 20, website: http://sf-police.org/Modules/ShowDocument.aspx?documentid=14683, accessed January 26, 2010.

Schools

The San Francisco Unified School District (SFUSD) oversees the public school system in San Francisco (K–12). The SFUSD is comprised of 37 preschools and 104 schools serving various grade levels (K–5, K–8, and 9–12). Based on data for the 2008-2009 school year, there are approximately 56,000 students currently attending public schools in San Francisco.[16] It is estimated that another 20,000 students, 26 percent of the total enrollment, attend local private schools. Over the past decade, student enrollment in the SFUSD has been declining by approximately 0.1 percent annually.[17] Table V.M-4 shows the existing classroom capacity and enrollment for the SFUSD for 2008.

Table V.M-4
Existing Classroom Capacity and Enrollment, SFUSD, 2008

Type of School	Number of Schools	Capacity	2008-2009 Enrollment
Elementary	63	29,260	24,939
Middle	13	11,700	11,816
High	16	17,575	19,691
Alternative	10	3,900	--
Public Charter	2	1,400	--
Total	**104**	**63,835**	**56,446**

Source: San Francisco Unified School District, San Francisco Unified School District Capital Plan FY 2009–2018, Appendix; California Department of Education, 2009. Educational Demographics Unit, Data Quest System: 2008–09 District Enrollment by Grade, San Francisco Unified, 2008. http://data1.cde.ca.gov/dataquest, accessed April 14, 2010.

SFUSD is the primary public school provider in the City, accommodating approximately 98 percent of the total public school enrollment. Additional public school facilities include court-sponsored facilities (correctional institutions, court ward facilities, etc.) and public charter schools.

As shown in Table V.M-4, there is capacity for approximately 63,835 students in existing SFUSD facilities. Although neighborhoods with a high population of school-age children generate a proportionally high level of demand for nearby schools, SFUSD assigns students to schools based on a lottery system. This system ensures that student enrollment is distributed to facilities that have sufficient capacity to adequately serve the educational needs of students. The SFUSD provides bus transportation to students who attend schools outside of the neighborhood in which they reside.

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[14] Id. at pages 21, 27.

[15] Id. at page 22.

[16] Public school attendance based on: California Department of Education, 2008–09 District Enrollment by Grade, San Francisco Unified, Educational Demographics Unit, DataQuest System, 2009. http://data1.cde.ca.gov/dataquest, accessed April 14, 2010. The 2005 American Community Survey reported that public school attendance represents approximately 74 percent of the total school attendance in San Francisco, while private school attendance represents 26 percent of the total.

[17] California Department of Education, DataQuest, http://data1.cde.ca.gov/dataquest/, accessed April 14, 2010.

With enrollment declining in the District, SFUSD has been closing schools. The SFUSD's capital facilities program has focused on replacing older schools and modernizing other facilities. The San Francisco Unified School District Capital Plan identifies a range of physical improvements necessary to modernize existing facilities, such as providing access compliant with the Americans with Disabilities Act (ADA), upgrading science and computer labs, expanding arts facilities, and other improvements. In addition, the SFUSD has a backlog of deferred maintenance needs.

SFUSD had approximately 2,985 teachers during the 2008-2009 school year with a ratio of one teacher to 18.5 students.[18] Average teaching experience within the SFUSD for kindergarten through 12th grade teachers is 11.3 years.[19]

SFUSD began collecting state-authorized school impact fees in 1987, which are collected to mitigate development impacts that generate pupil growth (e.g., new housing). The following are the current fees charged by the SFUSD for new construction, by facility type, when building permits are issued:[20]

- Residential: $2.24 per square foot (sq. ft.)
- Office: $0.27 per sq. ft.,
- Research and Development: $0.24 per sq. ft.,
- Hospitals: $0.22 per sq. ft.,
- Industrial/Warehouse/Manufacturing: $0.21 per sq. ft.,
- Retail and Services/Self Storage: $0.18 per sq. ft., and
- Lodging/Hotel/Motel: $0.09 per sq. ft.

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[18] Education Data Partnership, District Report, selection for County of San Francisco, website: http://www.ed-data.k12.ca.us/Navigation/fsTwoPanel.asp?bottom=%2Fprofile%2Easp%3Flevel%3D06%26reportNumber%3D16, accessed January 27, 2010..

[19] SFUSD, About SFUSD, Did you know?, website: http://portal.sfusd.edu/template/default.cfm?page=about.didyouknow, accessed January 27, 2010.

[20] SFUSD Real Estate Department Developer Fee Schedule, http://portal.sfusd.edu/data/real_estate/Developer%20Fee%20Schedule.doc, accessed April 14, 2010.

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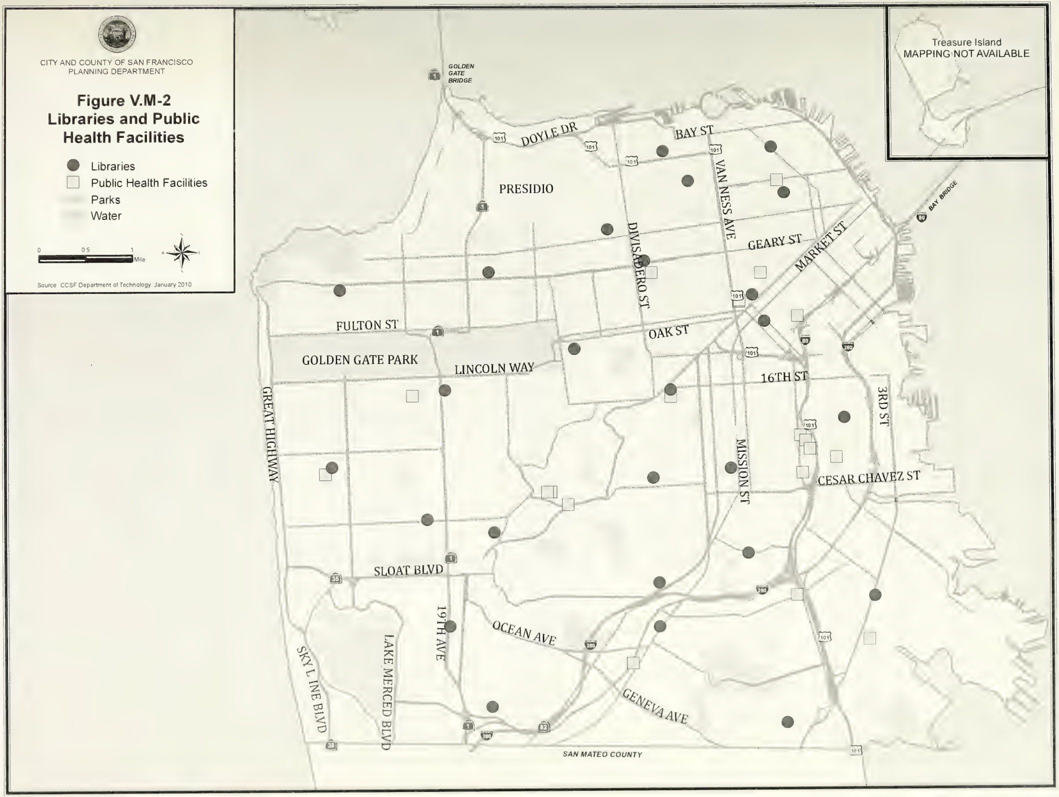
Figure V.M-2 Libraries and Public Health Facilities



Source CCSF Department of Technology January 2010

School impact fees apply to projects involving the addition of new square footage, whether the project involves new construction or involves expansion of an existing structure.[21] Whether a construction involves merger of existing units is irrelevant.[22]

Libraries

The San Francisco Public Library (SFPL) consists of 28 branch libraries, the Main Library located in the Civic Center area, and a book mobile program. Table V.M-5 displays the size, volumes of books, service population, and staffing levels of the Main Library and each branch library and Figure V.M-2 shows the location of library branches within the City. The Citywide library holdings in fiscal year 2007-2008 included 2,574,208 books, of which 1,359,463 books are contained in the Main Library. During this time, the various libraries were visited by patrons 5,963,197 times, of which 2,077,222 visits were to the Main Library.[23] Also during this time, the library system organized and hosted 8,870 events at which 316,818 visitors attended.[24] These programs consisted of classes, lectures, panel discussions, author readings, exhibits, films, meetings, performances, celebrations, school visits and summer reading enrollees.[25] Most of these events were for children and youth and were attended by 271,319 children.[26] Libraries are open seven days a week and are open later on some weeknights until 8:00 PM.

Table V.M-5
San Francisco Public Library Branch Information (Fiscal Year 2008-2009)

Branch	Size of Outlet (sq. ft.)	Volumes	Service Population*	Staffing Levels**
Anza	7,332	30,357	23,313	7.25
Bayview	7,287	40,382	34,043	6.87
Bernal Heights	8,747	21,217	24,952	4.87
Chinatown	19,200	147,330	49,438	21.72
Eureka Valley	5,610	25,958	26,370	5.37
Excelsior	8,322	70,998	49,297	12.1
Glen Park	7,185	42,314	14,863	6.3
Golden Gate Valley	6,259	27,663	18,619	4.45
Ingleside	4,800	29,601	12,845	5.37
Main	376,000	1,359,463	845,559	186.73
Marina	7,633	45,526	20,471	8.9
Merced	5,140	26,292	17,283	8.37

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[21] Telephone consultation with Willy Yau, Manager of Technical Services Division at the San Francisco Department of Building Inspection, on April 14, 2010.

[22] Id.

[23] San Francisco Public Library, About the Library, Statistics and Reports, Overview, website: http://www.sfgov.org/site/frame.asp?u=http://www.sfpl.org/, accessed January 27, 2010.

[24] Id.

[25] Id.

[26] Id.

Table V.M-5
San Francisco Public Library Branch Information (Fiscal Year 2008-2009)

Branch	Size of Outlet (sq. ft.)	Volumes	Service Population*	Staffing Levels**
Mission	10,479	88,259	63,620	16.25
Mission Bay	7,500	43,608	14,163	6.5
Noe Valley	6,096	30,543	22,142	5.72
North Beach	5,530	39,789	21,487	7.25
Ocean View	4,794	15,463	22,494	4.2
Ortega	5,057	30,922	30,328	9.87
Park	8,825	29,971	29,696	6.02
Parkside	5,824	35,167	20,555	7.82
Portola	6,427	30,207	11,360	5.3
Potrero	5,557	14,339	10,542	4.37
Presidio	10,205	34,483	15,962	5.8
Richmond	13,900	86,553	47,405	17
Sunset	9,434	69,974	44,906	15.72
Visitacion	2,300	23,545	18,493	5.32
West Portal	6,786	76,700	26,414	11.25
Western Addition	8,000	57,584	42,526	8.1
Total	**580,229**	**2,574,208**		**414.79**

Notes:
* *Service population areas overlap between neighborhood branch libraries.*
** *Other Support/System-wide staff total 230.24, for a grand total of 645.03 FTE.*

Source: Jill Bourne, Deputy City Librarian, San Francisco Public Library, response to service letter request, December 23, 2009.

In November 2000, voters passed a bond measure for $105.9 million.[27] The Branch Library Improvement Program (BLIP) calls for 16 branches to be renovated, four leased facilities to be replaced with City-owned buildings, three branches to be replaced with new buildings, and the construction of the brand-new Mission Bay branch, the first new branch in 40 years. The SFPL has reached 50 percent completion of the BLIP.[28] When completed, the BLIP will result in updated and expanded facilities, with increased resources, technology, seating, and community space, to meet the service needs identified in each neighborhood.

Library operations are currently funded through tax-based revenue. Previously assessed mitigation fees for development projects were developed prior to the BLIP.[29] Updated developer fees would be based upon a comparison of library facility square footage per capita (post BLIP) to the construction/development costs of library construction projects in 2008 and 2009, calculated per square foot. At 0.69 square feet per person and a cost in today's dollars of $1,213 per square foot, the library projects a mitigation fee of $837 per additional resident.

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[27] City and County of San Francisco Recreation and Park Department, Memorandum to Recreation and Park Operations Committee regarding Ortega Library, website: http://www.sfgov.org/site/uploadedfiles/recpark/meetings/Recreation_and_Park_Commission/supporting/2009/item6Ortega.pdf, accessed January 27, 2010.

[28] Jill Bourne, Deputy City Librarian, San Francisco Public Library, response to service letter request, December 23, 2009.

[29] Id.

Public Health Facilities

The San Francisco Department of Public Health (SFDPH) includes two divisions: the Community Health Network (CHN) and Population Health and Prevention.[30] The CHN is the City's health system and has locations throughout the City including San Francisco General Hospital Medical Center and Laguna Honda Hospital and Rehabilitation Center. Figure V.M-2 shows the location of public health facilities within the City. DPH's primary care health centers include:[31]

- Castro-Mission Health Center
- Children's Health Center at San Francisco General Hospital (SFGH)
- Chinatown Health Center
- Curry Senior Center
- Family Health Center at SFGH
- General Medical Clinic at SFGH
- Maxine Hall Health Center
- Ocean Park Health Center
- Potrero Hill Health Center
- Silver Avenue Family Health Center
- Southeast Health Center
- STD Clinic on 7th Street station[32]

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[30] San Francisco Department of Public Health (DPH), About DPH, website: http://www.sfdph.org/dph/comupg/aboutdph/doingBusDPH/, accessed January 27, 2010.

[31] DPH, Our Services, website: http://www.sfdph.org/dph/comupg/oservices/medSvs/hlthCtrs/default.asp, accessed January 27, 2010.

[32] Post Exposure Prevention.

The Population Health and Prevention Division has a broad focus on the communities of San Francisco and is comprised of the Community Health and Safety Branch, Community Health Promotion and Prevention Branch, and the Community Health Services Branch. One program established by the SFDPH is Direct Access to Housing (DAH), which is a permanent housing program targeting low-income City residents who are homeless/at-risk of homelessness and have special needs.[33] DAH currently houses close to 1,000 formerly homeless persons across 24 sites. By 2013, DAH plans to expand to house at least 650 additional tenants at seven new housing sites.

REGULATORY SETTING

Federal

No federal regulations related to public services are applicable to the proposed Housing Elements.

State

Senate Bill 50 and Proposition 1A

Senate Bill 50 (SB 50) and Proposition 1A provided a comprehensive school facilities financing and reform program. The provisions of SB 50 prohibit local agencies from denying land use approvals on the basis that school facilities are inadequate and reinstate the school facility fee cap for legislative actions. Government Code §65996 states that the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

California Education Code

California Education Code §17620(a)(1) states that the governing board at any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.

California Fire Code

California Fire Code §508 addresses fire protection water supplies. Specific requirements for fire flow and fire hydrant systems vary depending on the number of units in the building and the type of construction.

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[33] DPH, Our Programs, website: http://www.sfdph.org/dph/comupg/oprograms/DAH/default.asp, accessed January 29, 2010.

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to public services are discussed in Section V.A (Plans and Policies) of this Draft EIR. General Plan objectives and policies discussed in this section are as follows:

Community Facilities Element:

Objective 1: Distribute, locate and design police facilities in a manner that will enhance the effective, efficient and responsive performance of police functions.

Policy 1.1: Locate police functions that are best conducted on a centralized basis in a police headquarters building.

Policy 1.2: Provide the number of district stations that balance service effectiveness with community desires for neighborhood police facilities.

Policy 1.3: Enhance closer police/community interaction through the decentralization of police services that need not be centralized.

Policy 1.4: Distribute, locate, and design police support facilities so as to maximize their effectiveness, use, and accessibility for police personnel.

Policy 1.6: Design facilities to allow for flexibility, future expansion, full operation in the event of a seismic emergency, and security and safety for personnel, while still maintaining an inviting appearance that is in scale with neighborhood development.

Policy 1.7: Combine police facilities with other public uses whenever multi-use facilities support planning goals, fulfill neighborhood needs, and meet police service needs.

Policy 2.1: Provide expanded police/community relations and police services through outreach programs, primarily utilizing existing facilities.

Policy 2.2: Establish police district boundaries along natural neighborhood edges, and reinforce neighborhood identity by locating district stations near the centers of their service areas.

Policy 2.3: Design police facilities to maximize opportunities for promoting community/police relations through dual use of facilities.

Objective 5: Development of a system of firehouses which will meet the operating requirements of the Fire Department in providing fire protection services and which will be in harmony with related public service facilities and with all other features and facilities of land development and transportation provided for other sections of the General Plan.

Objective 6: Development of a public library system in San Francisco which will make adequate and efficient library service freely available to everyone within the City, and which will be in harmony with related public service facilities and with all other features and facilities of land management and transportation provided for in other sections of the General Plan.

Objective 7: Distribution throughout the City of District Public Health Centers to make the educational and preventative services of the Department of Public Health convenient to the people, thereby helping to achieve the goals of the public health program in San Francisco.

Objective 8: Assure that public school facilities are distributed and located in a manner that will enhance their efficient and effective use.

San Francisco Police Code

The San Francisco Police Code contains regulations for various types of activities such as automobile use, permitting and licensing, use of ports, and disorderly conduct.

San Francisco Fire Code

The San Francisco Fire Code incorporates by reference the California Fire Code, with certain local amendments. The San Francisco Fire Code was revised in 2007 to regulate and govern the safeguarding of life and property from fire and explosion hazards arising from the storage, handling, and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises; and to provide for the issuance of permits, inspections, and other SFFD services; and the assessment and collection of fees for those permits, inspections, and services. The SFFD reviews building plans to ensure that fire and life safety is provided and maintained in the buildings that fall under its jurisdiction. SFFD plan review applies to all of the following occupancy types:[34]

- All Assembly Occupancies (including restaurants and other gathering places for 50 or more occupants);
- All Educational Occupancies (including commercial day care facilities);
- All Hazardous Occupancies (including repair garages, body shops, fuel storage, and emergency generator installation);

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[34] San Francisco Fire Department, Plan Check, http://www.sf-fire.org/index.aspx?page=56, accessed April 14, 2010.

- All Storage Occupancies where potential exists for high-piled storage as defined by Fire Code;
- All Institutional occupancies;
- All High-rise building of all occupancies;
- Residential Occupancies, such as hotels, motels, lodging houses, residential care facilities, apartment houses, small- and large-family day care homes, and R-1 artisan buildings (excluding minor residential repairs such as kitchen and bath remodeling and dry rot repair);
- Certified family-care homes, out-of-home placement facilities, halfway house, drug and/or alcohol rehabilitation facilities;
- Tents, awnings, or other fabric enclosures used in connection with any occupancy; and
- All fire alarm and fire suppression systems.

In coordination with the San Francisco Department of Building Inspection (DBI), the SFFD conducts plan checks to ensure that all structures, occupancies, and systems outlined above are designed in accordance with the San Francisco Building Code. Section 511 (Local Fire Safety Feature Requirements) of the San Francisco Fire Code requires that buildings 200 feet or more in height must provide at least one elevator approved by the Fire Department for firefighter use under fire conditions. The section also requires that for buildings having floors used for human occupancy located more than 75 feet above the lowest level of Fire Department vehicle access, an air replenishment system shall be installed to provide a means for firefighters to refill air bottles for self-contained breathing apparatus (SCBA) through a permanently installed piping distribution system. The system shall be tested and maintained pursuant to the Fire Department Administration Bulletin.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, or other services.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. The 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes. Potential impacts related to recreational facilities are analyzed in Section V.K (Recreation).

Impact PS-1: The proposed Housing Elements would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection. (Less than Significant)

New construction could result in impacts related to fire protection if new housing would result in the need for additional fire protection in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of fire protection facilities.

2004 Housing Element Analysis

The following 2004 Housing Element policies could result in the need for new or altered fire protection facilities by promoting increasing density and directing housing growth to certain areas of the City. As discussed throughout this EIR, the proposed Housing Elements would not result in increased population growth. The Housing Element is a public policy document that provides direction for how and where new housing in the City should occur.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas. The 2004 Housing Element also promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6).

New construction that is developed to greater densities could result in the need for new or altered fire protection facilities by increasing housing in areas that may experience inadequate capacity to accommodate an increased or changed need for service. Therefore, the 2004 Housing Element policies that promote increased density and residential uses in commercial and industrial areas, could potentially result in new construction in areas that do not have adequate fire protection.

The following 2004 Housing Element policies could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of fire protection facilities by promoting seismic retrofits, promoting maintenance of existing housing, promoting housing in established neighborhoods, and ensuring housing is provided with adequate public services.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Promotes seismic upgrades/retrofits, maintenance of existing housing, and correction of code violations.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 2.4: Retain sound existing housing in commercial and industrial areas.	Policy 3.6: Restrict the conversion of housing in commercial and industrial areas.
	Policy 3.1:Ensure that existing housing is maintained in a decent, safe, and sanitary condition without increasing rents or displacing low-income households.	Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary condition at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
	Policy 3.4: Monitor the correction of serious continuing code violations to prevent the loss of housing.	Policy 5.3: Assure correction of serious continuing code violations and loss of housing.
	Policy 3.5: Improve the seismic stability of existing housing without reducing the supply of affordable housing.	Objective 4: To reduce the risk of bodily harm and the loss of housing in an earthquake. Policy 4.3: Improve the seismic stability of existing housing. Policy 4.2: Reduce seismic hazards in unreinforced masonry building without reducing the supply of affordable housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 3.5.3: The DBI is also developing a Community Action Plan for Seismic Safety (CAPSS) which is investigating the impacts of potential earthquakes and developing policies and programs to reduce these impacts.	
Promote housing in established neighborhoods, which likely have adequate fire protection service.	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate infill housing on appropriate sites in established neighborhoods.
Ensure housing is provided with adequate public services, including fire protection service.	Policy 11.2: Ensure housing is provided with adequate public improvements, services, and amenities.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
Continue to mandate seismic retrofits of reinforced masonry buildings (UMB).	Implementation Measure 3.5.2: The City Department of Building Inspection (DBI) will continue to mandate the seismic retrofit of unreinforced masonry buildings.	

As shown above, the 2004 Housing Element proposes a number of policies and implementation measures that promote seismic upgrades and maintenance activities to a degree similar to the 1990 Residence Element. Seismic upgrades and maintenance activities could reduce the 2004 Housing Element's effects regarding fire protection by ensuring housing is maintained in a safe condition and potentially reducing the number of emergency situations requiring SFFD response. 2004 Housing Element Policy 2.1, 3.1, 3.4, and 11.2 are essentially the same as their corresponding 1990 Residence Element policies. 2004 Housing Element Policy 2.4 clarifies that sound existing housing should be retained in commercial and industrial areas, while 1990 Residence Element 3.6 generally states that conversion of housing should be restricted. Compared to 1990 Residence Element Policy 5.4, 2004 Housing Element Policy 3.3 clarifies that the condition of public housing would be maintained. 2004 Housing Element Policy 3.5 would essentially merge 1990 Residence Element Policies 4.2 and 4.3 and there is no change between these policies. 2004 Housing Element Policy 1.4 clarifies the intent of Residence Element Policy 1.4 by stating that in-fill housing is to be established in residential neighborhoods. 2004 Housing Element Implementation Measure 3.5.2 does not represent a policy change from the current practices of the DBI. Essentially both the 1990 Residence Element and 2004 Housing Element recognize the need for seismically sound housing and therefore do not represent a policy shift. The 2004 Housing Element policies encourage the preservation and rehabilitation of existing housing, promote seismic upgrades and retrofits, and promote the maintenance of housing units in a safe condition. Seismic upgrades and other activities that would maintain housing in a safe condition could reduce the number of emergency situations requiring SFFD response. Furthermore, the placement of housing in established neighborhoods would ensure that the appropriate type and level of fire protection service is available.

Although the 2004 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed state and local regulations, including the San Francisco Fire Code. SFFD's concerns with new construction include (but are not limited to): building type and height; building construction; occupancy type and load; proximity to other emergency services; topographical challenges; and ingress/egress concerns. As new construction occurs, the SFFD would analyze and evaluate housing levels, occupant load, response times, and other operational objectives to ensure adequate fire protection. As discussed in the Setting subsection above, the SFFD, on average, meets its desired performance standard. Furthermore, the SFFD has indicated that they have adequate resources to meet the existing demand for fire protection and indicate that the SFFD is actively involved in ongoing planning efforts. Through these efforts, SFFD is able to plan for adequate fire facilities, apparati and adequate staffing levels at each station.[35]. During the design phase for all buildings, the SFFD would review all plans to ensure adequate fireflows and hydrants. Furthermore, while the 2004 Housing Element promotes increased density, it would not increase overall Citywide population. Therefore, no changes to service ratios are expected as a result of the 2004 Housing Element. As the City grows, service areas will be reevaluated and resources will be reallocated to accommodate needs for services in specific parts of the City, if and when conditions warrant. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered fire protection facilities.

2009 Housing Element Analysis

Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density than the 1990 Residence Element. These include the following themes: increasing density for affordable housing projects and increased density as a strategy to be pursued during the community planning process.

The following 2009 Housing Element policies could potentially result in the need for new or altered fire protection facilities by promoting increasing density and directing housing growth to certain areas of the City.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy

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[35] Barbara Shultheis, Fire Marshal, SFFD, response to service letter request, November 9, 2009.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1 Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure (Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80). Additionally, the 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64).

Directing growth to certain areas of the City (e.g., near transit, within a community plan, etc.), as opposed to scattered throughout the City could result in more efficient response times. However, the 2009 Housing Element policies could potentially result in increased density that could result in the need for new or altered fire protection facilities by directing housing to areas of the City which may not be able to accommodate additional service needs or result in a changed need for service.

The following 2009 Housing Element policies could reduce the 2009 Housing Element's effects on the potential need for the construction or expansion of fire protection facilities by promoting the identification of suitable housing sites, promoting seismic upgrades, and promoting the maintenance of existing housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Potentially assist in the identification of suitable housing sites, including fire protection service capacity.	Policy 1.2: Plan for the full range of housing needs in the City and County of San Francisco, especially affordable housing.	
Seismic upgrades to existing housing would increase safety for residents and potentially	Policy 2.5: Encourage and support the seismic retrofitting of the existing housing stock.	Objective 4: To reduce the risk of bodily harm and loss of housing in an earthquake Policy 4.3: Improve the seismic stability of existing housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
reduce the number of service calls.	Policy 7.6: Acquire and rehabilitate existing housing to maximize effective use of affordable housing resources.	
	Implementation Measure 21: Through Community Action Plan for Seismic Safety (CAPSS), DBI shall develop and adopt a program which mandates seismic upgrades for "soft-story" buildings.	
	Strategy 8: As a part of the CAPPS Program, DBI should evaluate the need for revisions to the San Francisco Building Code; the need for the retrofit of designated shelters or the determination of alternate seismically safe locations; and the need for mitigation programs for critical non-ductile concrete buildings	
Improvements and maintenance of existing housing would increase safety for residents and potentially reduce the number of service calls.	Policy 2.4: Promote improvements and continued maintenance to existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary condition at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element proposes a number of policies (including Policies 1.1 and 7.6) that promote seismic upgrades and maintenance activities to a greater degree than the 1990 Residence Element. Seismic upgrades and maintenance activities could reduce the 2009 Housing Element's potential effects on fire services by ensuring housing is maintained in a safe condition and potentially reducing the number of emergency situations requiring SFFD response. 2009 Housing

Element Policies 2.4, 2.5, and 9.3; Implementation Measure 21; and Strategy 8 are essentially the same as their corresponding 1990 Residence Element policies. Essentially both the 1990 Residence Element and 2009 Housing Element recognize the need for seismically sound housing and therefore do not represent a policy shift. The 2009 Housing Element policies encourage the preservation and rehabilitation of existing housing, seismic upgrades and retrofits, and the maintenance of housing units in a safe condition. Seismic upgrades and other activities that would maintain housing in a safe condition could reduce the number of emergency situations requiring SFFD response.

Although the 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed state and local regulations, including the San Francisco Fire Code. As new construction occurs, the SFFD would analyze and evaluate housing levels, occupant load, response times, and other operational objectives to ensure adequate fire protection. As discussed in the analysis for the 2004 Housing Element, the SFFD, on average, meets its desired performance standard, and has indicated that they have adequate resources to meet the existing demand for fire protection. The SFFD is actively involved in ongoing planning efforts and through these efforts, SFFD is able to plan for adequate fire facilities, apparati and adequate staffing levels at each station.[36]. During the design phase for all buildings, the SFFD would review all plans to ensure adequate fireflows and hydrants. Furthermore, while the 2009 Housing Element promotes increased density, it would not increase overall Citywide population. Therefore, no changes to service ratios are expected as a result of the 2009 Housing Element. As the City grows, service areas will be reevaluated and resources will be reallocated to accommodate needs for services in specific parts of the City, if and when conditions warrant. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered fire protection facilities.

Impact PS-2: The proposed Housing Elements would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection. (Less than Significant)

The ratio of field officers to population in San Francisco is approximately 1.41 officers per 1,000 residents, which is within state and federal standards for acceptable service. Average police response time to incidence calls Citywide is 3:35 minutes for Priority A calls, 7:19 minutes for Priority B calls, and 10:30 minutes for Priority C calls. Response times for most individual districts are within a similar range.

New construction could result in impacts related to police protection if new housing results in the need for additional police protection in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of police protection facilities. For example, new housing could introduce residential uses in previously industrial or commercial areas, which could result in a need for different types and levels of police protection service.

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[36] Barbara Shultheis, Fire Marshal, SFFD, response to service letter request, November 9, 2009.

2004 Housing Element Analysis

As discussed under Impact PS-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, and 11.7 would promote increased density and Policies 1.1, 1.3, and 1.6and Implementation Measure 1.3.1 would promote housing in more industrial and commercial areas compared to the 1990 Housing Element. New construction associated with housing could potentially result in the need for the construction or expansion of police protection facilities. While the Housing Element policies do not propose any new construction, they do promote increased density. If new construction is built to increased density standards in areas currently underserved by police services, this could increase response times or result in unacceptable service ratios.

The following 2004 Housing Element policy could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of police protection facilities by potentially reducing blight and associated crime.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Potentially reduce blight, which could reduce crime.	Policy 11.1: Use new housing development as a means to enhance neighborhood vitality and diversity.	

As shown above, the 2004 Housing Element proposes Policy 11.1, which promotes the enhancement of neighborhood vitality through housing, which could have the effect of reducing crime and the associated emergency situations requiring SFPD response.

As discussed under Impact PS-1, the 2004 Housing Element also contains Policies 3.3 and 1.4, which could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of police protection facilities by promoting improvements and maintenance of existing units. Under some circumstances, it is likely that SFPD may be required to respond to an emergency situation and by promoting the maintenance of existing units, the 2004 Housing Element may reduce the potential for hazardous living condition that may result in an emergency incident. As discussed above, San Francisco's current service ratio of 1.41 officers per 1,000 residents is within acceptable state and federal standards. As with fire protection services, the SFPD will continue to evaluate their performance based on response times, and when appropriate will reallocate resources to accommodate needs for services in specific parts of the City, if and when conditions warrant. Furthermore, while the 2004 Housing Element promotes increased density, it would not increase overall Citywide population. Therefore, no changes to service ratios are expected as a result of the 2004 Housing Element. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered police protection facilities.

2009 Housing Element Analysis

As discussed under Impact PS-1, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element may promote greater density. These include the following themes: increased density standards for affordable housing projects; and increased density as a strategy to be pursued during community planning processes. The 2009 Housing Element could potentially result in the need for the construction or expansion of police protection facilities by promoting increased density in certain areas of the City.

The following 2009 Housing Element policies could reduce the 2009 Housing Element's potential density-related effects on the potential need for the construction or expansion of police protection facilities by promoting increased residential presence, infill development, and design that promote community interaction, thereby potentially reducing blight and associated crime.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Promote housing in non-residential single - use developments, which could potentially reduce crime by increasing daily neighborhood presence and everyday street activity.	Policy 1.8: Promote mixed-use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.7: Obtain assistance from office developments and higher educational institutions in meeting the housing demand they generate, particularly the need for affordable housing for lower income workers and students. Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing including commercial development.
Promote infill development, potentially increasing daily neighborhood presence and everyday street activity.	Policy 1.4: Ensure land use controls are proposed through neighborhood-supported community planning processes.	Policy 1.4: Locate infill housing on appropriate sites in established neighborhoods.
Promote community interaction, potentially increasing daily neighborhood presence and everyday street activity.	Policy 11.5: Foster a sense of community through architectural design, using features that promote community interaction	

As shown above, the 2009 Housing Element proposes Policy 1.8 which promotes the inclusion of housing in new office and institutional developments to a greater degree than the 1990 Residence Element. Similarly, 2009 Housing Element Policy 11.5 advocates for the use of building forms to promote community interaction through such features as seating ledges, outdoor seating and the use of stoops and porticos to create an inviting community environment, increasing the daily neighborhood presence. Increasing the residential population could potentially reduce crime, as criminal activity is more likely to occur in isolated and hidden. The inclusion of residents in single-use areas and promoting neighborhood presence and everyday street activity could reduce the 2009 Housing Element's effects on the potential need for new or altered police protection facilities by reducing crime and blight, potentially reducing the number of emergency situations requiring SFPD response. As discussed under Impact PS-1, the 2009 Housing Element also contains Policies 2.4 and 9.3, which could reduce the 2009 Housing Element's effects on the potential need for the construction or expansion of police protection facilities by promoting improvements and maintenance of existing units, which could result in a reduction in emergency calls requiting SFPD assistance.

As discussed above, San Francisco's current service ratio of 1.41 officers per 1,000 residents is within acceptable state and federal standards. As with fire protection services, the SFPD will continue to evaluate their performance based on response times, and when appropriate will reallocate resources to accommodate needs for services in specific parts of the City, if and when conditions warrant. Furthermore, while the 2009 Housing Element promotes increased density, it would not increase overall citywide population. Therefore, no changes to service ratios are expected as a result of the 2009 Housing Element. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered police protection facilities.

Impact PS-3: The proposed Housing Elements would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for schools. (Less than Significant)

As discussed in the Setting subsection above, the SFUSD assigns schools based on a lottery system. This lottery system ensures that student enrollment is distributed to facilities that have sufficient capacity to adequately serve the educational needs of students. Therefore, directing growth to certain areas of the City would generally not affect the school system because students are not assigned to schools based on location. New construction could result in impacts related to schools if new housing results in additional need for schools and the SFUSD would not have capacity to accommodate the students in existing facilities, thereby requiring the construction or expansion of school facilities. SFUSD currently has capacity for approximately 63,835 students in existing SFUSD facilities and enrolls approximately 56,446 students. Therefore, existing school enrollment is not over capacity.

2004 Housing Element Analysis

The 2004 Housing Element includes policies that promote the construction of family-sized housing units (2004 Housing Element Policy 1.7). New construction associated with family-sized housing would accommodate more families, some with school aged children, potentially increasing the City's school-age population and resulting in the need for the construction or expansion of school facilities.

Although the 2004 Housing Element would not result in the construction of residential units, it does promote the development of family-sized housing units, which could accommodate more families with school-aged children. As discussed above, SFUSD student enrollment is currently under capacity. Pursuant to California Education Code Section 17620(a)(1), the governing board at any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. The payment of such fees would reduce any impacts of new development on school services, as provided in Section 65996 of the California Government Code. As discussed above, residential development is assessed a development fee of $2.24 per square foot to address the impacts of new development on school services. Additionally, the 2004 Housing Element policies would not affect overall population growth, as anticipated by regional projections. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered school facilities.

2009 Housing Element Analysis

Similar to the 2004 Housing Element, the 2009 Housing Element also includes policies that promote family-sized housing units.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Allows demolition and mergers if family-sized housing is created, which is likely to generate more children than typical multi-family units.	Policy 2.2: Retain existing housing by controlling the merger of residential units, except where a merger clearly creates new family housing.	Policy 3.1: Discourage the demolition of sound existing housing. Policy 3.2: Control the merger of residential units.
Allows more family housing in multi-family structures, which is likely to generate more children than single-family homes and typical multi-family units (such as studios and one-bedroom apartments).	Implementation Measure 32: Planning should evaluate the impact of requiring minimum percentages of family units in new and recently adopted community plans and continue the practice where it promotes family housing that is acceptable to residents.	

As shown above, the 2009 Housing Element promotes family housing to a greater degree than the 1990 Residence Element. Family housing could result in the need for new or altered school facilities by accommodating larger households, which could result in an increase in the number of families with school-aged children, thereby decreasing the excess capacity in the school system. 2009 Housing Element Policy 2.2 would allow demolition and mergers if family-sized housing is created (e.g., this measure has the potential to demolish two one-bedroom units for one 2-3 bedroom unit). Compared to 1990 Residence Element Policies 3.1 and 3.2, 2009 Housing Element Policy 2.2 provides a stipulation that unit mergers can occur in cases where the needs for family housing are supported. While, the 2009 Housing Element would not in itself result in increased population, construction of family sized housing units could potentially result in the need for the construction or expansion of school facilities.

Although the 2009 Housing Element would not result in the construction of residential units, all new residential development is assessed a development fee of $2.24 per square foot to address the impacts of new development on school services. The payment of such fees would reduce any impacts of new development on school services, as provided in Section 65996 of the California Government Code. Given that SFUSD is currently under capacity, new development would be assessed a development fee paid towards school services, and the proposed 2009 Housing Elements would not increase overall population growth projected by regional agencies, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered school facilities.

Impact PS-4: The proposed Housing Elements would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for libraries. (Less than Significant)

New construction could result in impacts related to libraries if new housing results in additional need for libraries in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of library facilities. For example, the housing element policies could promote changes in density or the introduction of residential uses in previously industrial or commercial areas, which could result in a need for increased library service. Existing library facilities per geographic area in the southeast quadrant of the City is lower than in the rest of the City.[37] A large number of the City's pipeline housing units and overall capacity for new housing is located within the southeast quadrant of the City. The BLIP will result in expanded and updated services in each neighborhood currently served by a branch library, plus a brand new facility in Mission Bay for the growing community in that area. The SFPL does not anticipate these facilities reaching capacity, though expanded demand could necessitate extended public service hours for branch libraries. Currently, 15 branch libraries are open six days per week, allowing the library to respond to increased population growth citywide by potentially increasing service hours to seven days per week. To accommodate growth and needed services anticipated in the southeast quadrant of the City, additional SFPL facilities or service points would be considered in accordance with the previously discussed mitigation fees.

2004 Housing Element Analysis

As discussed under Impact PS-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 would promote increased density and Policies 1.1, 1.2, and 1.3 and Implementation Measure 1.3.1 would promote housing in more industrial and commercial areas compared to the 1990 Housing Element. New construction associated with housing could potentially result in the need for the construction or expansion of library facilities because increased density or changes in land use patterns could locate housing in areas with inadequate library service.

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[37] Jill Bourne, Deputy City Librarian, San Francisco Public Library, response to service letter request, December 23, 2009.

As discussed under Impact PS-1, the 2004 Housing Element also contains Policies 1.4 and 11.2, which could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of library facilities by promoting housing in established residential neighborhoods where adequate library service is likely to already exist and ensuring that housing is provided with adequate public services, including library service. Although the 2004 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed mitigation and developer fees. Specifically, the contribution of property taxes to the City fund could be used to support SFPL services. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered library facilities.

2009 Housing Element Analysis

As discussed under Impact PS-1, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density than the 1990 Residence Element. These include the following themes: increased density for affordable housing projects and increased density as a strategy to be pursued through community planning processes. 2009 Housing Element Policies related to density or directing growth to certain areas of the City could potentially result in the need for the construction or expansion of library facilities by increasing residential uses in those areas.

As discussed under Impact PS-1, the 2009 Housing Element also contains Policy 12.2, which could reduce the 2009 Housing Element's effects on the potential need for the construction or expansion of library facilities by considering the proximity of neighborhood services, including libraries, when developing housing. Although the 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed mitigation and developer fees. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered library facilities.

Impact PS-5: The proposed Housing Elements would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered public health facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for any public health facilities. (Less than Significant)

New construction could result in impacts related to public health facilities if new housing results in additional need for public health facilities in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of public health facilities. For example, housing element policies that could result in density changes or the introduction of residential uses in previously industrial or commercial areas, could result in a need for different types and levels of public health service.

2004 Housing Element Analysis

As discussed under Impact PS-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 would promote increased density and Policies 1.1, 1.2, and 1.3 and Implementation Measure 1.3.1 would promote housing in more industrial and commercial areas. New construction associated with housing could potentially result in the need for the construction or expansion of public health facilities because increased density or changes in land use patterns could locate housing in areas with inadequate public health facility capacity.

As discussed under Impact PS-1, the 2004 Housing Element also contains Policies 1.4 and 11.2, which could reduce the 2004 Housing Element's effects on the potential need for the construction or expansion of public health facilities by promoting housing in established residential neighborhoods where adequate public health service is likely to already exist and ensuring that housing is provided with adequate public services, including public health service. 2004 Housing Element Policy 10.1 slightly modifies 1990 Residence Element Policy 15.1 by implying that services, such as health care, would be incorporated into affordable housing projectsAlthough the 2004 Housing Element would not directly result in the construction of residential units, policies that call for new housing with adequate services would reduce impacts to public health facilities. Furthermore, the proposed 2004 Housing Element would not increase overall population growth projected by regional agencies. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered public health facilities.

2009 Housing Element Analysis

As discussed under Impact PS-1, the 2009 Housing Element would direct growth to certain areas of the City and also includes policies that promote the increased residential density for affordable housing projects and through community planning processes. New housing construction could potentially result in the need for the construction or expansion of public health facilities because increased density or changes in land use patterns could locate housing in areas with inadequate public health facility capacity.

As discussed under Impact PS-1 and Impact PS-2, 2009 Housing Element Policy 12.2 could reduce the 2009 Housing Element's effects on the potential need for the construction or expansion of public health facilities by considering the proximity of neighborhood services, including public health facilities, when developing housing Although the 2009 Housing Element would not result in the construction of residential units, policies that call for new housing with adequate services reduce impacts to public health facilities. Furthermore, the proposed 2009 Housing Element would not increase overall population growth projected by regional agencies. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the need for new or altered public health facilities.

Cumulative Impacts

The geographic context for cumulative public service impacts is the entire City of San Francisco. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the City resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City, which expects a population of 888,400 by 2025, could contribute to impacts related to public services. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing Elements. The proposed Housing Elements merely guide residential new construction with an emphasis on affordability and increased density.

The 2004 Housing Element and 2009 Housing Element would not directly result in the construction of residential units. New residential development in the City would be required to comply with all applicable federal, state, and local regulations related to public services on a project-by-project basis, including school impact fees and other developer impact fees that could be used to support the SFPL. The SFFD and SFPD would be responsible for addressing fire and police protection demands within the City. The proposed Housing Elements include policies and implementation measures that would reduce potential effects to public services, as discussed above. The contribution of potential impacts from the proposed Housing Elements to the cumulative public service impacts would not be cumulatively considerable. As such, cumulative impacts would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvements measures are warranted by the proposed Housing Elements.

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V. ENVIRONMENTAL SETTING AND IMPACTS
N. BIOLOGICAL RESOURCES

INTRODUCTION

This section addresses potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to sensitive or special status species, riparian habitats and sensitive natural communities, federally protected wetlands, movement of native or migratory fish and wildlife species as well as wildlife corridors and wildlife nursery sites, local policies and ordinances protecting biological resources, and habitat conservation and natural community conservation plans.

ENVIRONMENTAL SETTING

San Francisco is a highly developed urban area. Land uses within the City are characterized primarily by generally moderate to high-density urban uses, including residential, commercial, and industrial uses. Many areas within the northern, eastern, and northeastern portions of the City, specifically the areas located along the waterfront, were formerly part of the San Francisco Bay. The shoreline along the aforementioned portions of the City is depicted as being further inland according to survey maps of the mid-1800s. Extensive filling took place in the 1800s, which greatly reduced the marshland and Bay habitat.

Franciscan Landscape

San Francisco comprises an integral component of the Franciscan landscape, a distinct biogeographic area of the northern San Francisco Peninsula (Peninsula) that ranges from Montara Mountain and Coyote Point to the Golden Gate.[1] This unique landscape forms the northernmost reach of the Santa Cruz Mountains subregion within the much larger Bay-Delta Region. The Franciscan landscape shares some clear affinities with other nearby landscape units, such as the Marin Headlands, the Tiburon Peninsula, and Point Richmond, all of which are low, narrow peninsulas that are strongly shaped by maritime conditions.

Sensitive and Special Status Species

Special-status species are plants and animals that are legally protected under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA) or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.

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[1] San Francisco Recreation & Parks, Significant Natural Resource Areas Management Plan (Final Draft), at page 3-3, February 2006.

A search of the California Natural Diversity Database (CNDDB) was conducted to identify sensitive plant and wildlife species historically noted in the City. The CNDDB report includes the Point Bonita, San Francisco North, San Francisco South, and Hunters Point USGS 7.5-Minute Quads. The species identified by the search, their specific habitat requirements, and location of occurrence in the City are outlined in Tables V.N-1 and V.N-2.

Based on examination of the results of the CNDDB search, it is improbable that any of the aforementioned species occur on or in the immediate vicinity of developable areas of the City. Many occurrences are confined to areas in the Presidio or are located on lands under the control of the Department of Recreation and Parks.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
bent-flowered fiddleneck *Amsinckia lunaris*	--	--	List 1B.2	Cismontane woodland and valley and foothill grassland, associated with margins of thickets on south and southeast facing slopes, among rocky outcrops.	50-500 m AH March-June	San Bruno Mountain, "North Tank Hill".
Franciscan manzanita *Arctostaphylos hookeri* ssp. *franciscana*	--	--	List 1A	Serpentine outcrops in chaparral. Associated with serpentine rocky hillslopes and exposed to strong winds. Associated with *Arctostaphylos hookeri* ssp. *ravenii.*	60-300 m S (e) February-April	Documented from Laurel Hill Cemetery, Masonic Cemetery, and Mount Davidson. Believed to be extirpated from these sites.
Presidio manzanita *Arctostaphylos hookeri* ssp. *ravenii*	FE	CE	List 1B.1	Chaparral, coastal prairie, and coastal scrub, associated with open rocky serpentine slopes exposed to strong sea winds.	20 -215 m S (e) February-March	Occurrences documented near Baker Beach and Crissy Field in 2005. Presumed extant. Several extirpated occurrences documented at Mount Davidson and in the Presidio area.
San Bruno Mountain manzanita *Arctostaphylos imbricata*	--	CE	List 1B.1	Chaparral and coastal scrub, associated with sandstone outcrops.	275-365 m S (e) February-May	Three occurrences on San Bruno Mountain documented in 1981 and 1995. Presumed extant.
Montara manzanita *Arctostaphylos montaraensis*	--	--	List 1B.2	Chaparral and coastal scrubs, associated with slopes and ridges.	150-500 m S (e) January-March	Occurrence near summit of San Bruno Mountain documented in 1980. Presumed extant.
Pacific manzanita *Arctostaphylos pacifica*	--	CE	List 1B.2	Coastal scrub.	330 m S (e) February-April	Documented near San Bruno Mountains in 2007. Presumed extant.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
marsh sandwort *Arenaria paludicola*	FE	CE	List 1B.1	Openings in sandy marshes and freshwater and brackish swamps.	3-170 m PH (s) May-August	Documented from Fort Point in 1899. Species is presumed extirpated due to extensive habitat modification.
alkali milk-vetch *Astragalus tener* var. *tener*	--	--	List 1B.2	Playas, adobe clay valley and foothill grassland, and vernal pools, associated with alkaline soils.	1-170 m AH March-June	Documented in Potrero District, exact location unknown. Species is presumed extirpated due to extensive habitat modification.
bristly sedge *Carex comosa*	--	--	List 2.1	Margins of marshes and swamps.	-5-1005 m PH (r) May-September	Documented in swamp near San Francisco, exact location unknown. Source of information for occurrence is from 1866. Species is presumed extirpated due to extensive habitat modification.
San Francisco Bay spineflower *Chorizanthe cuspidata* var. *cuspidata*	--	--	List 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub, associated with sandy soils on terraces and slopes.	5-550 m AH April-July	Occurrences documented in 1992 in Lake Merced and Fort Funston area, near Ocean View, on Lone Mountain, south of Sutro Heights, and in the Presidio. Presumed extant.
robust spineflower *Chorizanthe robusta* var. *robusta*	FE	--	1B.1	Cismontane woodland, coastal dunes, and coastal scrub, associated with sandy terraces and bluffs or in loose sand.	3-120 m AH April-September	One extirpated occurrence documented in the vicinity of the Ocean View district east of Lake Merced.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
Franciscan thistle *Cirsium andrewsii*	--	--	List 1B.2	Broadleafed upland forest, coastal bluff scrub, coastal prairie, and coastal scrub, associated with mesic, andsometimes serpentine, soils.	0-135 m PH March-July	Occurrences documented at Lake Merced and in the Presidio. Most recent documented occurrences are 2002. Presumed extant.
compact cobwebby thistle *Cirsium occidentale* var. *compactum*	--	--	List 1B.2	Chaparral, coastal dunes, coastal prairie, and coastal scrub, associated with dunes and clay in chaparral, and grassland.	5-155 m PH April-June	One extirpated occurrence documented in the vicinity east of Lake Merced.
Presidio clarkia *Clarkia franciscana*	FE	CE	List 1B.1	Coastal scrub and serpentine valley and foothill grassland.	20-335 m AH May-July	Two occurrences documented in the San Francisco Presidio in 2005. Presumed extant. In addition, there is one potentially extirpated occurrence along McDowell Avenue in the Presidio.
round-headed Chinese-houses *Collinsia corymbosa*	--	--	List 1B.2	Coastal dunes and coastal prairie.	10-30 m AH April-June	Occurrence documented in 1902 in the Presidio. Presumed extant.
San Francisco collinsia *Collinsia multicolor*	--	--	List 1B.2	Closed-cone coniferous forest and coastal scrub, associated with decomposed shale mixed with humus.	30-250 m AH March-May	Occurrences documented in Glenn Park in 1929, Bernal Heights in 1925, Bayview Hill Park in 1957, and Bayshore Hills in 1939. Presumed extant.
Point Reyes bird's-beak *Cordylanthus maritimus* ssp. *palustris*	--	--	List 1B.2	Coastal salt marshes and swamps.	0-15 m AH June-October	Occurrence in Crissy Field wetland observed in 2002. Presumed extant.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
fragrant fritillary *Fritillaria liliacea*	--	--	List 1B.2	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland. Often associated with serpentine soils.	3-410 m PH (b) February-April	Occurrence observed in Twin Peaks. Date unknown. Presumed extant.
blue coast gilia *Gilia capitata* ssp. *chamissonis*	--	--	List 1B.1	Coastal dunes and coastal scrub	2-200 m AH April-June	Occurrences documented on Hawk Hill about Herbert Hoover Middle School in 1996, Lake Merced in early 1900s, Bakers Beach in 1998 Forest Hill in 1914 and Land's End in 1907. Presumed extant.
dark-eyed gilia *Gilia millefoliata*	--	--	List 1B.2	Coastal dunes.	2-20 m AH April-July	Possibly extirpated. Occurrence documented in Presidio in 1912.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	--	--	List 1B.2	Coastal bluff scrub, coastal scrub, and valley and foothill grassland, associated with sandy or serpentine soils and sea bluffs.	15-400 m PH June-September	Occurrences documented on open slopes at Laguna Honda, the Presidio area, open north facing slope at Mount Davidson, Lake Merced, Twin Peaks, cliff slopes about O'Shaughnessy Boulevard, and edge of Glen Canyon Park. Occurrences documented variously in 1980s. Presumed extant.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
Diablo helianthella *Helianthella castanea*	--	--	List 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland, associated with chaparral/oak woodland interface in rocky, azonal soils, often in partial shade.	25-1150 m PH March-June	Occurrence documented in Bayview Hills in 1899. Presumed extant.
seaside tarplant *Hemizonia congesta* ssp. *congesta*	--	--	List 1B.2	Valley and foothill grassland and coastal scrub, associated with grassy valleys and hills, often in fallow fields.	25-200 m AH April-November	Occurrence documented in 1890s or early 1900s, exact location unknown. Species is presumed extirpated due to extensive habitat modification.
short-leaved evax *Hesperevax sparsiflora* var. *brevifolia*	--	--	List 1B.2	Coastal bluff scrub and coastal dunes, associated with sandy bluffs and flats.	0-200 m AH March-June	Occurrence documented on rocky grassy slopes of McLaren Park, date unknown. Presumed extant.
Marin western flax *Hesperolinon congestum*	FT	CT	List 1B.1	Chaparral and valley and foothill grassland, associated with serpentine soils.	30-365 m AH April-July	Documented from Laurel Hill Cemetery and Lone Mountain. Believed to be extirpated from these sites. One extant occurrence has been documented in the San Francisco Presidio in 2005.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
Kellogg's horkelia *Horkelia cuneata* ssp. *sericea*	--	--	List 1B.1	Closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub, associated with openings and sandy or gravelly soils.	10-200 m PH April-September	Occurrences documented in Lake Merced and Point Lobos. Presumed extant, but areas were searched sometime in 1980s or 1990s but no plants were found. Species was planted in 2001 in Baker Beach; the plants were observed in the planting area in 2002.
beach layia *Layia carnosa*	FE	CE	List 1B.1	Coastal dunes, associated with sparsely vegetated, semi-stabilized dunes, usually behind foredunes.	0-75 m AH March-July	Documented from San Francisco sand dunes in 1904 (exact location unknown). Presumed extirpated at this site due to limited remaining habitat.
rose leptosiphon *Leptosiphon rosaceus*	--	--	List 1B.1	Coastal bluff scrub.	0-100 m AH April-July	Exact location in San Francisco unknown. Probably extirpated.
San Francisco lessingia *Lessingia germanorum*	FE	CE	List 1B.1	Coastal scrub, associated with remnant dunes and open sandy soils relatively free of competing plants.	20-125 m AH July-November	Two extant occurrences documented from Crissy Field (2001) and in southwestern portion of San Francisco Presidio (2005). Two extirpated occurrences documented from Lake Merced (1905) and east of St. Ignatius Church (1927).

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
arcuate bush-mallow *Malacothamnus arcuatus*	--	--	List 1B.2	Chaparral, associated with gravelly alluvium.	80-355 m S (e) April-September	Occurrence documented west of Skyline Boulevard, near the San Francisco jail site. Presumed extant, but no plants were found during 2000 search of site. The area where plant could occur is bulldozed for firebreaks.
marsh microseris *Microseris paludosa*	--	--	List 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland.	5-300 m PH April-June	Occurrence documented in 1956 in the Presidio. Presumed extirpated.
white-rayed pentachaeta *Pentachaeta bellidiflora*	FE	CE	List 1B.1	Cismontane woodland and valley and foothill grassland. Often associated with open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock.	35-620 m AH March-May	Presumed extirpated. Occurrences documented outside City of San Francisco (San Bruno Mountain and Marin City).
Choris' popcorn-flower *Plagiobothrys chorisianus* var. *chorisianus*	--	--	List 1B.2	Mesic chaparral, coastal prairie, and coastal scrub.	15-100 m AH March-June	Presumed extant. Occurrence documented in Golden Gate Park, exact location unknown. Date of documentation unknown.
San Francisco popcorn-flower *Plagiobothrys diffusus*	--	CE	List 1B.1	Coastal prairie and valley and foothill grassland, historically associated with grassy slopes with marine influence.	60-485 m AH March-June	Presumed extant. Documented in the Presidio on clay flat above Mountain Lake and at the US Marine Hospital. Plants not found in 1987. Site is severely disturbed by human activities and development. No vernal pools or clay flats visible.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
hairless popcorn-flower *Plagiobothrys glaber*	--	--	List 1A	Alkaline meadows and seeps and coastal salt marshes and swamps.	5 -180 m AH March-May	Possibly extirpated. Occurrence documented in 1924 outside City of San Francisco (Manzanita in Marin County).
Oregon polemonium *Polemonium carneum*	--	--	List 2.2	Coastal prairie, coastal scrub, and lower montane coniferous forest.	0-1830 m PH April-September	Presumed extant. Documented on Angel Island, date unknown.
adobe sanicle *Sanicula maritima*		CR	List 1B.1	Chaparral, coastal prairie, meadows and seeps, and valley and foothill grassland, associated with clay and ultramaficsoils.	30-240 m PH February-March	Documented from Potrero Hills before 1900. Species is assumed to be extinct in this area.
San Francisco campion *Silene verecunda* ssp. *verecunda*	--	--	List 1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland, associated with mudstone or shale.	30-645 m PH March-June	Presumed extant. Occurrences documented on Mount Davidson and in the Presidio. Last observation was in 2002.
Santa Cruz microseris *Stebbinsoseris decipiens*	--	--	List 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland, associated with open areas in loose or disturbed soil, usually derived from sandstone, shale, or serpentine soils, on seaward slopes.	10-500 m AH April-May	Presumed extant. Documented on Angel Island in 1968.
California seablite *Suaeda californica*	FE	--	List 1B.1	Marshes and swamps, associated with margins of coastal salt marshes.	0-5 m S (e) July-October	Documented from Heron's Head Park in 2007.

Table V.N-1
Special-Status Plant Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status			Habitat Requirements	Elevation Range, Life Form, Flowering Period	Location of Occurrence
	Federal	State	CNPS			
San Francisco owl's-clover *Triphysaria floribunda*	--	--	List 1B.2	Coastal prairie, coastal scrub, and valley and foothill grassland. Usually associated with serpentine soils and non-serpentine substrate.	10-160 m AH April-June	Presumed extant. Occurrences documented in the Presidio in 2002. Extirpated occurrences documented in Lake Merced and Potrero.
coastal triquetrella *Triquetrella californica*	--	--	List 1B.2	Coastal bluff scrub and coastal scrub, associated with Moss growing on soil.	10-100 m M --	Presumed extant. Occurrences documented in Diamond Heights and Clarendon Heights, date unknown.

STATUS KEY:

Federal
FE: Federally-listed Endangered
FT: Federally-listed Threatened

State
CE: California-listed Endangered
CT: California-listed Threatened
CR: California-listed Rare

CNPS
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and elsewhere.
List 2: Plants rare and endangered in California, but more common elsewhere.
List 3: Taxa about which more information is needed.
List 4: Plants of limited distribution.

LIFE FORM KEY:
AH: Annual Herb
PH: Perennial Herb
PS: Perennial Stem
M: Moss
S: Shrub
(b): bulb
(d): deciduous
(e): evergreen
(r): rhizome
(s): stoloniferous

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status		Habitat Requirements	Location of Occurrence
	Federal	State		
INVERTEBRATES				
incredible harvestman *Banksula incredula*	--	*	Franciscan sandstone talus slope.	Presumed extant. Occurrence documented outside City of San Francisco (San Bruno Mountain).
Tomales isopod Caecidotea tomalensis	--	*	Localized fresh-water ponds or streams with still or near-still water.	Presumed extant. Occurrences documented in Lake Merced area in 1966 and 1971.
San Bruno elfin butterfly *Callophrys mossii bayensis*	FE	--	Coastal mountains near San Francisco Bay, in the fog-belt of steep north facing slopes that receive little direct sunlight. Found near prolific growths of the larval food plant, stonecrop, which is associated with rocky outcrops that occur at 900 to 1,075 foot elevation. Adult food plants not fully determined; Montara Mountain colonies are suspected to use Montara Mountain manzanita and huckleberry.	Presumed extant. Occurrences documented in 1992 outside City of San Francisco (Pacific, San Bruno Mountain, and Milagro Ridge Reserve County Park).
sandy beach tiger beetle *Cicindela hirticollis gravida*	--	*	Inhabits areas adjacent to non-brackish water along the coast of California, associated with clean, dry, light colored sand in the upper zone.	Extirpated. Specimens collected between 1906 and 1922.
monarch butterfly *Danaus plexippus*	--	*	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Presumed extant. Documented occurrences in Angel Island State Park (1990), Golden Gate Park (1994), Telegraph Hill (date unknown), and the Presidio (1998).
Stage's dufourine bee *Dufourea stagei*	--	*	Ground-nesting bee.	Presumed extant. Occurrence documented outside City of San Francisco (San Bruno Mountain).
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT	--	Shallow, serpentine-derived soils in native grasslands supporting larval host plants, dwarf plantain or purple owl's clover.	Two extirpated occurrences documented from Twin Peaks and Mount Davidson (1970s).

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status		Habitat Requirements	Location of Occurrence
	Federal	State		
Leech's skyline diving beetle *Hydroporus leechi*	--	*	Found in aquatic habitats.	Possibly extirpated. Occurrence documented outside City of San Francisco (Pacifica).
San Francisco forktail damselfly *Ischnura gemina*	--	*	San Francisco Bay area. Found in small, marshy ponds and ditches with emergent and floating aquatic vegetation.	Presumed extant. Occurrence documented in Glen Park (date unknown).
bumblebee scarab beetle *Lichnanthe ursina*	--	*	Coastal sand dunes from Sonoma County south to San Mateo County. Usually flies close to sand surface near the crest of the dunes.	Presumed extant. Documented occurrence in Ocean Beach in 1881 and 1949.
Mission blue butterfly *Plebejus icarioides missionensis*	FE	--	Coastal chaparral and coastal grasslands dominate the vegetation type where colonies are found. Adults do not wander far from lupine, the larval food plant. Adults feed on golden aster, bluedicks, Ithuriel's spear, and coast buckwheat.	Four extant occurrences documented from Twin Peaks (2001) and Fort Baker (1985), Bayview Hill (2001), and McLaren Park (1988).
callippe silverspot butterfly *Speyeria callippe callippe*	FE	--	Restricted to the Northern Coastal scrub of the San Francisco Peninsula. Host plants are Johnny jump up and canary violet.	One extirpated occurrence documented from Twin Peaks (no date).
A leaf-cutter bee *Trachusa gummifera*	--	*	--	Documented occurrence in Hunters Point area (date unknown).
California brackishwater snail *Tryonia imitator*	--	*	Inhabits coastal lagoons, estuaries and salt marshes, found only in permanently submerged areas in a variety of sediment types, able to withstand a wide range of salinities.	Extirpated. Occurrence documented outside City of San Francisco (Bay Farm Island).
Marin hesperian *Vespericola marinensis*	--	*	Found in moist spots in coastal brushfield and chaparral vegetation in Marin County.	Presumed extant. Occurrences documented outside City of San Francisco (Sausalito and Point Bonita).

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status		Habitat Requirements	Location of Occurrence
	Federal	State		
FISHES				
tidewater goby *Eucyclogobius newberryi*	FE	CSC	Brackish shallow lagoons and lower stream reaches where the water is fairly still, but not stagnant. Prefer a sand substrate component for breeding, but also found on rocky, mud, and silt substrates as well. Found in waters with salinity levels from 0 to 42 ppt, temperature levels from 8 to 25 degrees Celsius, and water depths from 25 to 200 centimeters	Presumed extant. Occurrence documented outside City of San Francisco (Rodeo Lagoon, Marin County). One extirpated occurrence documented from Lake Merced (1895).
hardhead *Mylopharodon conocephalus*	--	CSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River. Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	Presumed extant. Documented occurrence in Lake Merced in 1939 and 1989.
coho salmon - Central California coast ESU *Oncorhynchus kisutch*	FE	CE (listing limited to coho salmon south of San Francisco Bay) CSC	Spawn in cool, clear streams featuring suitable gravel size, depth, and current velocity. Streamside vegetation and cover area essential for fry survival.	Presumed extant. Occurrence documented outside City of San Francisco (Muir Woods).
AMPHIBIANS				
California red-legged frog *Rana draytonii*	FT	CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development.	Eight extant occurrences documented from Lloyd Lake in Golden Gate Park (2005), Mountain Lake in the Presidio (1999), Lands End in Lincoln Park (1995), Lake Merced/Fort Funston (1997), Stow Lake in Golden Gate Park (2001), near De Young Museum (2001), Strybing Arboretum in Golden Gate Park (2005), Oriental Pond in Golden Gate Park (1995).

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status		Habitat Requirements	Location of Occurrence
	Federal	State		
REPTILES				
western pond turtle *Actinemys marmorata*	--	CSC	Permanent or nearly permanent bodies of water with protected areas for basking, such as partially submerged rocks or logs, floating vegetation mats or open mud banks.	Extant occurrences documented in Pine Lake Park and Lake Merced in 2000, and in Golden Gate Park in 2005.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE	CE	Vicinity of freshwater marshes, ponds, and slow moving streams in San Mateo county and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	Documented from San Francisco South USGS Quad. Sensitive location information suppressed.
BIRDS				
Western Snowy Plover *Charadrius alexandrinus nivosus*	FT	CSC (nesting)	Breeds primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. In winter, found on many of the beaches used for nesting as well as on beaches where they do not nest, in man-made salt ponds, and on estuarine sand and mud flats.	Presumed extant. Occurrence documented outside City of San Francisco (Bay Farm Island).
Saltmarsh Common Yellowthroat *Geothlypis trichas sinuosa*	--	CSC	Freshwater marshes, coastal swales, swampy riparian thickets, brackish marshes, salt marshes, and edges of disturbed weed fields and grasslands that border soggy habitats.	Presumed extant. Occurrence documented in Lake Merced in 1985.
California Black Rail *Laterallus jamaicensis coturniculus*	--	CT Cfp	Marshlands with unrestricted tidal influence (estuarine, intertidal, emergent, regularly flooded). Prefers areas dominated by pickleweed, bulrushes, matted salt grass, and other marsh vegetation.	One extant occurrence documented from Lake Merced in 1989.

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status		Habitat Requirements	Location of Occurrence
	Federal	State		
Alameda Song Sparrow *Melospiza melodia pusillula*	--	CSC	Resident of salt marshes bordering south arm of the San Francisco Bay. Requires dense vegetation for nesting, perches, and cover from predators.	Presumed extant. Occurrences documented outside City of San Francisco (Bay Farm Island, Colma Creek, and San Bruno).
San Pablo Song Sparrow *Melospiza melodia samuelis*	--	CSC	Resident of salt marshes bordering the north side of the San Francisco and San Pablo Bays. Requires dense vegetation for nesting, perches, and cover from predators.	Presumed extant. Occurrence documented outside City of San Francisco (Belvedere).
Double-crested Cormorant *Phalacrocorax auritus*	--	Cwl (rookery site)	Lakes, ponds, rivers, lagoons, swamps, coastal bays, marine islands, and seacoasts; usually within sight of land. Nests on the ground or in trees in freshwater situations, and on coastal cliffs (usually high sloping areas with good visibility).	Presumed extant. Documented occurrence in Lake Merced (2000) and along Bay Bridge (date unknown).
California Clapper Rail *Rallus longirostris obsoletus*	FE	CE Cfp	Saltwater and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. In the south and central San Francisco Bay and along the perimeter of San Pablo Bay, rails typically inhabit salt marshes dominated by pickleweed and Pacific cordgrass.	Presumed extant. Occurrences documented outside City of San Francisco (San Bruno Point and South San Francisco near South Airport Boulevard).
Bank Swallow *Riparia riparia*	--	CT (nesting)	Open and partly open habitats, frequently near flowing water. Nests in steep sand, dirt, or gravel banks, in a burrow dug near the top of the bank, along the edge of inland water or along the coast, or in gravel pits or road embankments.	Three extant occurrences documented from Fort Funston (1987), Lake Merced (1908-1938), and Ocean Beach (1960).
MAMMALS				
southern sea otter *Enhydra lutris nereis*	FT	Cfp	Coastal waters near shore, especially shallows with kelp beds and abundant shellfish.	Presumed extant. Occurrence documented outside City of San Francisco (Sausalito Point).

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name **Scientific Name**	**Status**		**Habitat Requirements**	**Location of Occurrence**
	Federal	**State**		
western red bat *Lasiurus blossevillii*	--	CSC	Roost primarily in the foliage of trees or shrubs, prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Presumed extant. Documented occurrence in Golden Gate Park in 2000.
hoary bat *Lasiurus cinereus*	--	*	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding, associated with dense foliage of medium to large trees	Presumed extant. Documented occurrence in Gilman Playground (1951) and Golden Gate Park (1987).
Angel Island mole *Scapanus latimanus insularis*	--	*	Known only from Angel Island in the San Francisco Bay. Needs habitats with friable soils for burrowing.	Presumed extant. Documented occurrence on Angel Island in 1936.
American badger *Taxidea taxus*	--	CSC	Prefers open areas and may also frequent brushlands with little groundcover. Although may prefer habitats with more friable soils for digging burrows, which are used for dens, escape, and predation, the hard-baked earth in the middle of an unpaved road is no obstacle. When inactive, occupies underground burrows that are elliptical shaped and eight or more inches in diameter.	Presumed extant. Documented occurrences in Golden Gate Park (1936) and Outer Sunset (1947).
Point Reyes jumping mouse *Zapus trinotatus orarius*	--	CSC	Primarily found in bunchgrass marshes on the uplands of Point Reyes. Also, found in coastal scrub, grassland, and meadow habitats.	Presumed extant. Occurrences documented outside City of San Francisco (Fort Barry and Tennessee Valley).

KEY:

(nesting and/or wintering) = For most taxa, the CNDDB is interested in information that indicates the presence of a resident population. For some species (primarily birds), the CNDDB only tracks certain parts of the species range or life history (e.g., nesting locations).

Table V.N-2
Special-Status Wildlife Species Potentially Occurring in the San Francisco Region

Common Name Scientific Name	Status		Habitat Requirements	Location of Occurrence
	Federal	State		
STATUS Federal FE: Federally-listed Endangered FT: Federally-listed Threatened FD: Federally-delisted			State CE: California-listed Endangered CT: California-listed Threatened CSC: California Species of Special Concern Cfp: California Fully Protected Species Cwl: California Watch List *: California Special Animal (species with no official federal or state status, but are included on the CDFG's Special Animal List due to limited distribution).	

Sensitive Natural Communities, Riparian Habitats, Habitat Corridors

Urban development and human activities within the City limit its value for wildlife species. Species found in the City today are generally those capable of surviving in a complex urban environment, such as raccoons (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunks (*Mephitus mephitus*), etc.[2] As of 1998, 356 species of birds had been recorded in San Francisco County.[3] This count includes resident, migratory, pelagic, and vagrant species. Street trees provide resting places for common bird species, but the constant vehicle and pedestrian traffic limits their use for nesting. Most of the bird species observed are present in the San Francisco Bay during fall and winter, and leave in early spring to breed elsewhere.

Many of the open space areas in the City include developed and regularly maintained recreation facilities, oriented towards various types of active and passive use and enjoyment. Nature in the City, a project of Earth Island Institute, created a map of an updated and enhanced list of natural areas, park facilities, and other open space areas containing significant biological resources in San Francisco. Natural areas harbor the City's native habitats in restored areas and original landscapes, which are managed for biological diversity. Table V.N-3 shows an enhanced list of the 49 natural areas in San Francisco.

Table V.N-3
Features of Natural Areas in San Francisco

Site	Feature	Location
15th Avenue Steps	oak woodland	Kirkham Street & 15th Avenue
Alcatraz	seabird	2 kilometers north of Fisherman's Wharf
Baker Beach	dune	Battery Chamberlin & Gibson Road
Balboa Natural Area	dune	Balboa Street & The Great Highway
Bayview Hill Natural Area	coastal scrub, grassland	end of Key Avenue
Bernal Heights Natural Area	grassland	end of Bernal Heights Boulevard
Billy Goat Hill	grassland	Castro & 30th Street
Brooks Park	grassland	Shields & Vernon Street
Buena Vista Park	oak woodland	Buena Vista West & Haight Street
Candlestick Point	shoreline	Hunter's Point Expressway
Coastal Bluffs	coastal scrub	Merchant Road
Corona Heights	grassland	Roosevelt & Museum Way
Crissy Field	dune, wetland	Mason Street
Dorothy Erskine Open Space	exotic forest, grassland	Martha & Baden Street
Duncan & Castro Open Space	grassland	Duncan & Castro Street
Edgehill Mountain	grassland, coastal scrub, exotic forest	Edgehill & Garcia Street
Fairmount Open Space	exotic forest	Miguel & Bemis Street
Fort Funston	dune	Skyline Boulevard
Fort Point	coastal scrub, wetland	Marine Drive, Presidio
Glen Canyon	grassland, coastal scrub,	O'Shaughnessy Boulevard & Elk Street

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[2] San Francisco Recreation & Parks, Significant Natural Resource Areas Management Plan (Final Draft), at pages 3-12 – 3-13, February 2006.

[3] San Francisco Recreation & Parks, Significant Natural Resource Areas Management Plan (Final Draft), at page 3-12, February 2006. Original Source: Cotter, H. 1998. Official bird list for San Francisco County.

Table V.N-3
Features of Natural Areas in San Francisco

Site	Feature	Location
	riparian/creek, exotic forest	
Golden Gate Heights Park	dune	Noriega & 15th Avenue
Grandview Park & Extension	dune	Noriega & 14th Avenue
Hawk Hill	dune	San Marcos & 14th Avenue
Heron's Head Park	wetland, grassland	Cargo Way
India Basin Shoreline Park	wetland	Hunter's Point Boulevard
Inspiration Point	grassland	Arguello Boulevard
Kite Hill	grassland	Yukon & 19th Street
Lake Merced	dune, wetland	Lake Merced Boulevard
Lakeview/Ashton Mini Park	grassland	Shields & Orizaba Street
Land's End Coastal Trail	coastal scrub	Point Lobos & Camino Del Mar
Lobos Creek Valley	riparian/creek, wetland	15th & 25th Avenue
McLaren Park	grassland, creek, wetland	Mansell & Visitacion Avenue
Mountain Lake	riparian	Park Boulevard & West Pacific Avenue
Mount Davidson Park	grassland, exotic forest	Dalewood & Sherwood
Mount Sutro	exotic forest, coastal scrub	Medical Center Way, UCSF
Oak Woodlands: Golden Gate Park	oak woodland	Fulton & Stanyan Street
Ocean Beach	dune	The Great Highway
O'Shaughnessy	grassland, coastal scrub	O'Shaughnessy & Del Vale Street
Palou-Phelps	grassland	Palou & Phelps Avenue
Pier 94	saltmarsh	Amador Street
Pine Lake Park	wetland, riparian	Crestlake Drive & Wawona Street
Presidio Hills	coastal scrub, oak woodland, wetland	Battery Caufield Road
Rock Outcrop	dune	Funston Street & 14th Avenue
Starr King Park	grassland	Carolina & 23rd Street
Strawberry Hill: Golden Gate Park	oak woodland	Stowe Lake Drive East
Tank Hill	grassland	Clarendon Avenue & Twin Peaks Boulevard
Tennessee Hollow	riparian/creek	McArthur Avenue
Twin Peaks	grassland, coastal scrub	Twin Peaks Boulevard
Yerba Buena Island	dune, oak woodland, grassland	Interstate 80

Source: Nature in the City, San Francisco's Natural Heritage Map (2nd Edition), July 2007.

As shown in Table V.N-3, riparian habitat is likely to occur in Glen Creek, Lobos Creek Valley, Pine Lake Park, and Tennessee Hollow. In addition, riparian habitat is likely to occur in Golden Gate Park near the freshwater ponds.[4]

As shown in Table V.N-3, sensitive natural communities include coastal dune habitat located in areas such as Crissy Field, Baker Beach, Fort Funston, and Ocean Beach. Two native forest series are identified and are dominated by either coast live oak (*Quercus agrifolia*) or California wax myrtle (*Myrica californica*). Small stands of California wax myrtle forest occur in the eastern portion of Golden Gate Park, but these may be planted trees. However, stands of coast live oak forest within Golden Gate Park are thought to be remnants of the historic vegetation. Stands of coast live oak forest occur at several other natural areas, and those at Buena Vista Park and 15th Avenue Steps are also likely to be remnant stands of the historic San Francisco vegetation. Baker Beach and Fort Funston are also likely to include seabluff scrub habitat, another sensitive community.[5]

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[4] Though Golden Gate Park is not included in the Nature in the City's list of natural areas, the presence of freshwater ponds and associated vegetation indicate that riparian habitat could be present.

In addition, an EIR is currently being prepared for the Significant Natural Resource Areas Management Plan (SNRAMP)[6]Areas on Department of Recreation and Parks property in the City, which are different than the natural areas previous discussed. The SNRAMP will be used by the resource managers over the next 20 years. The 31 Natural Areas located within the City are scattered mostly throughout the central and southern portions of the City and constitute approximately four percent of the total City area. They range in size from less than one acre (i.e., 15th Avenue Steps) to almost 400 acres (i.e., Lake Merced).

The movement and migration of wildlife in urban and suburban areas has been substantially altered due to habitat fragmentation over the past century. This fragmentation is most commonly caused by development, which can result in large patches of land becoming inaccessible and forming a virtual barrier between undeveloped areas, or resulting in additional roads which, although narrow, may result in barriers to smaller or less mobile wildlife species. Fragmented habitat corridors are located throughout the City. Habitat fragmentation results in isolated "islands" of habitat, which prevents the exchange of genetic material within species populations in different geographic areas necessary to maintain the genetic variability to withstand major environmental disturbances such as fire or climate change.[7]

Wetlands

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (ACE) and the U.S. Fish and Wildlife Service (USFWS), which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation. The ACE and the California Department of Fish and Game (CDFG) have jurisdiction over modifications to stream channels, rivers banks, lakes and other wetland features. Due to the extent of development and past filling within the City, jurisdictional wetlands and other water features are not prevalent within the City. However, wetlands are present in Crissy Field, Fort Point, Heron's Head Park, India Basin Shoreline Park, Lake Merced, Lobos Creek Valley, McLaren Park, Pine Lake Park, and Presidio Hills.[8] In addition to the documented areas listed, wetlands are likely present intermittently in any shoreline areas that contain coastal salt marsh and intertidal mudflats and in subtidal areas that provide shorebird foraging habitat (e.g., Aquatic Park, shoreline areas of the Marina District and yacht harbor, etc.).

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[5] These areas include rocky cliffs along the shoreline that are likely to support seabluff scrub habitat.

[6] The Notice of Preparation of an Environmental Impact Report for the Natural Areas Management Plan was released on April 22, 2009.

[7] California Wilderness Coalition, et. al. Missing Linkages: Restoring Connectivity to the California Landscape. (http://www.calwild.org/resources/pubs/linkages/index.htm).

REGULATORY SETTING

Federal

Federal Endangered Species Act

The FESA of 1973, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the FESA. The FESA has four major components: provisions for listing species, requirements for consultation with the USFWS and the National Marine Fisheries Service (NOAA Fisheries), prohibitions against "taking" of listed species, and provisions for permits that allow incidental "take." The FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the NOAA Fisheries share the responsibility for administration of the FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of the proposed Housing Elements to affect listed plants and animals.

Sensitive Species

The United States Forest Service designates plant and animal species identified by a regional forester that are not listed or proposed for listing under FESA for which population viability is a concern, as evidenced by significant current or predicted downward trend in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution, as "sensitive." Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

Clean Water Act Section 404 & 401

ACE and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33

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[8] Nature in the City, San Francisco's Natural Heritage Map (2nd Edition), July 2007.

CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under Section 404 include fill for development, water resource projects (such as dams and levees), infrastructure developments (such as highways and airports) and mining projects. Section 404 of the CWA requires a federal license or permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with the USFWS and/or NOAA Fisheries and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur (in this case the CDFG), with a view to conservation of birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

The Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act

The Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term “take” is defined as meaning, “to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires.” With a few exceptions, most birds are considered migratory under the MBTA. Disturbance that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

The Bald Eagle Protection Act (16 U.S.C. 668) was passed in 1940 to protect bald eagles and was later amended to include golden eagles. Under the act it is unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing eagles.

State

California Endangered Species Act

The State of California enacted similar laws to the FESA -- the California Native Plant Protection Act (NPPA) in 1977 and the California Endangered Species Act (CESA) in 1984. The CESA expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the California Fish and Game Code. To align with the FESA, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the CESA as threatened species, but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The CDFG implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the CNDDB, a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities. During the CEQA review process, the CDFG is given the opportunity to comment on the potential of the proposed Housing Elements to affect listed plants and animals.

Fully Protected Species & Species of Special Concern

The classification of "fully protected" was the CDFG's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibians and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with "fully protected" species state that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFG to authorize take resulting from recovery activities for state-listed species.

Species of special concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFG because they are declining at a rate that could result in listing or because they historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFG, land managers, consulting biologist, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

California Fish and Game Code Sections 3503 & 3513

According to Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MTBA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG.

California Native Plant Society

The CNPS publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version. The Inventory assigns plants to the following categories:

- 1A – Presumed extinct in California
- 1B – Rare, threatened, or endangered in California and elsewhere
- 2 – Rare, threatened, or endangered in California, but more common elsewhere
- 3 – Plants for which more information is needed
- 4 – Plants of limited distribution

Additional endangerment codes are assigned to each taxa as follows:

- 1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree of immediacy of threat).
- 2 – Fairly endangered in California (20-80 percent occurrences threatened).
- 3 – Not very endangered in California (<20 percent of occurrences threatened or no current threats known).

Plants on Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and are given special consideration under CEQA during project review. Although plants on List 3 and 4 have little or no protection under CEQA, they are usually included in the project review for completeness.

Porter-Cologne Water Quality Control Act

Waters of the State are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The RWQCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These waterbodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCB under the State Water Quality

Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require an ACE permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFG under Sections 1600-1616 of the California Fish and Game Code. A 1602 Lake and Streambed Alteration Agreement is generally required for any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself." Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFG.

California Oak Woodland Statute

In September 2004, State Bill 1334 was passed and added to the State Public Resources Code as Statute 21083.4, requiring all California counties to determine in their CEQA documents whether a project in its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. The California Fish and Game Code (Section 1361) defines oak woodland habitat as "an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover."

Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, state, and local conservation plans, policies or regulations. The CDFG ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its CNDDB.

Sensitive vegetation communities are also identified by CDFG on its List of California Natural Communities Recognized by the CNDDB. Impacts to sensitive natural communities and habitats identified in local or regional plans, policies, regulations or by federal or state agencies must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G).

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to biological resources are discussed in Section V.A (Plans and Policies) of this Draft EIR.

Chapter 8 of the San Francisco Environmental Code

Chapter 8 of the San Francisco Environment Code bans the use of tropical hardwood and virgin redwood for reasons including atmospheric imbalance and global warming and that the destruction of rainforests is contributing currently to extinction of 30 species of plant and animal life each day. The City prohibits the use, acquisition or purchase, directly or indirectly, by any City or County department or agency, of any tropical hardwoods or tropical hardwood wood products as well as virgin redwood or virgin redwood wood products.

San Francisco Integrated Pest Management Ordinance

Chapter 3 of the San Francisco Environmental Code states that the City, in carrying out its operations, shall assume pesticides are potentially hazardous to human and environmental health. City departments shall give preference to reasonably available nonpesticide alternatives when considering the use of pesticides on City property. The Integrated Pest Management Ordinance provides an outline of the City's integrated pest management (IPM) approach.

Urban Forest Plan

Pursuant to Chapter 12 of the San Francisco Environment Code, the Urban Forestry Council advises city departments, including the Board of Supervisors and the mayor. Its tasks are to develop a comprehensive urban forest plan; educate the public; develop tree-care standards; identify funding needs, staffing needs, and opportunities for urban forest programs; secure adequate resources for urban forest programs; facilitate coordination of tree-management responsibilities among agencies; and report on the state of the urban forest. The Council's scope of authority is completely advisory and educational in nature. The Council has prepared an Urban Forest Plan, which reviews the creation of San Francisco's urban forest, analyzes the structure and functional benefits of the forests, and identifies the challenges that threaten its future. Designed to provide a road map for policy-makers and implementers, the Plan identifies goals that are critical to maximizing the value of the forest. Underlying these goals is the understanding that the urban forest is a living and evolving resource that is adapted to the unique and often challenging conditions of the urban environment. These goals are directed at the owners and managers of the trees that comprise the urban forest.

Urban Forestry Ordinance

Section 804 of Article 16, "Urban Forestry Ordinance," in the San Francisco Public Works Code outlines the jurisdiction of the San Francisco Department of Public Works (DPW) over trees and landscaping. DPW has jurisdiction over planning, planting, protection, maintenance, and removal of trees or landscaping in the public right-of-way, as well as over certain trees on private property if they are deemed hazard, landmark, or significant trees. Pursuant to Article 16, the San Francisco Urban Forestry Ordinance's purposes include: realize the optimum public benefits of trees on the City's streets and public places; integrate street planting and maintenance with other urban elements and amenities; promote efficient, cost effective management of the City's urban forest; reduce the public hazard, nuisance, and expense occasioned by improper tree selection, planting, and maintenance; provide for the creation of an equitable, sustained, and reliable means of funding urban-forest management throughout the City; create and maintain a unified urban-forest resource; recognize that trees are an essential part of the City's aesthetic environment; recognize that green spaces are vital to San Francisco's quality of life; and ensure that landscaping in sidewalk areas is properly constructed and maintained in order to maximize environmental benefits, protect public safety, and limit conflicts with infrastructure. Directions are provided for planting and removal of street trees by the DPW and persons outside the DPW. .

Significant Trees

Significant trees are defined by City ordinance as trees in, or within 10 feet of, a public right-of-way that are greater than 20 feet tall, have a canopy greater than 15 feet in diameter, or have a trunk greater than 12 inches in diameter at 4.5 feet above grade.[9] Removal of significant trees requires the authorization of the DPW director or the director's designee, and is subject to the rules and procedures governing permits and disclosures as above.

Landmark Trees

In 2007, the San Francisco Board of Supervisors adopted legislation for designation and protection of landmark trees. Landmark trees can be anywhere within San Francisco, including private property. They are designated as such by the Board of Supervisors, based on criteria such as age, location, species, or visual quality. Once the tree has been designated, a notice indicating this designation is recorded for the property on which the tree is located. The City Zoning Administrator is required to identify landmark trees on proposed development or construction sites, and to notify the Urban Forestry Council and DPW. Special permits are required if the property is later proposed for development.[10] The City Zoning

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[9] San Francisco Public Works Code, Article 16, Urban Forestry Ordinance, Available at: http://www.municode.com/Resources/gateway.asp?pid=14142&sid=5, Section 810A.

[10] San Francisco Public Works Code, Article 16, Urban Forestry Ordinance, Available at:

Administrator or other City agency must impose measures to protect landmark trees on a construction site.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the Regional Housing Needs Assessment (RHNA) as determined by the Association of Bay Area Governments (ABAG). Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new

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http://www.municode.com/Resources/gateway.asp?pid=14142&sid=5, Section 810.

housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. The 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

Impact BI-1: The proposed Housing Elements would not have a substantial adverse effect on any candidate, sensitive, or special-status species; riparian habitat or other sensitive natural communities; federally protected wetlands; or interfere with the movement of species. (Less than Significant)

New construction could result in impacts related to biological resources if new housing would result in disturbance from construction activities, tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g, development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan. As shown in Figure IV-4 in Section IV (Project Description), the City's height districts allow the tallest buildings (121 to 550 feet) in the Downtown and SoMa areas, with a few exceptions in other areas of the City. Generally, lower heights in the western and southern portions of the City would not affect bird migration. Increases in density could be accomplished by promoting development to full height limits in the Downtown area, which could affect bird migration. On the other hand, increasing density could accommodate more of the City's fair share of the RHNA in fewer buildings, necessitating less new construction and less potential for disturbance or interference to biological resources.

2004 Housing Element Analysis

The 2004 Housing Element does not propose policies that would directly or indirectly encourage development of areas with sensitive habitat or species. However, the following 2004 Housing Element policies could affect bird migrations by encouraging increased density in Downtown areas.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio	Implementation Measure 1.1.3: Inclusion of housing in Downtown.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	development will provide major public benefits to the community.	
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 2004 Housing Element also encourages new housing through on-going and future community planning processes (Policies 1.1, 11.6 and Implementation Measures 1.3.1, 1.3.2, 1.6.2, and 2.4.2) and on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4). The 1990 Residence Element similarly directs growth to commercial and industrial areas, neighborhood commercial districts, the Downtown and on infill development sites, although to a lesser degree than the 2004 Housing Element. The 2004 Housing Element also advocates for housing in community plan areas and along transit corridors, both of which are policies that were not included in the 1990 Residence Element. Policies that direct growth to certain areas of the City could increase the amount of new housing occurring in those areas, thereby resulting in new development potentially requiring tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g, development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan.

The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk limits. Housing built to the maximum allowable height and bulk limits could require tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g, development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan.

The implementation measures associated with 2004 Housing Element Policy 1.3 are area specific, including Implementation Measure 1.3.1, and could result in greater environmental impacts than the 1990 Residence Element. Zoning changes would require additional environmental review to study the effects of the proposed zoning changes for each of the area plans. Therefore, the 2004 Housing Element promotes increased density in Downtown areas to a greater extent than the 1990 Residence Element and could therefore result in a greater impact to biological resources, including but not limited to bird migrations.

While, the 2004 Housing Element encourages projects to be developed to their maximum height and bulk allowances and, in certain areas, encourages greater height limits, a key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. The following 2004 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the amount of new housing required to meet the City's housing needs and subsequent biological resource impacts resulting from new development at maximum allowable height and bulk limits.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	Policy 5.5: Preserve landmark historic residential buildings.
	Implementation Measure 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	

As shown above, the 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.1, 3.3, and 3.6) to a degree similar to the 1990 Residence Element, which could reduce the amount of new housing required to meet the City's housing needs. Essentially, both the 1990 Residence Element and 2004 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. The preservation of existing housing reduces the potential for new development to build to maximum allowable height and bulk limits, thereby reducing the potential for subsequent biological resource impacts resulting from new development at maximum allowable height and bulk limits.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to biological resources would be offset by compliance with the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code, San Francisco's Green Building Ordinance, San Francisco's IPM Ordinance, San Francisco's Urban Forest Plan, and San Francisco's Urban Forestry Ordinance to minimize impacts related to biological resources. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to biological resources.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

The following 2009 Housing Element policies could result in the exposure of people to wind impacts by encouraging new development to maximum allowable height and bulk limits, potentially increasing building height and mass and thereby impacting biological resources.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79: Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80), thereby directing housing to commercial areas. As discussed previously, directing new housing to certain areas of the City could increase the amount of new housing occurring in those areas, thereby potentially resulting in new development potentially requiring tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g, development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan.

The 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). While the 2009 Housing Element contains a policy that advocates for family-sized housing units (Policy 4.1 and Implementation Measure 32), overall density increases from such policy would be speculative as less units would be accommodated within a given building envelope. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk, thereby potentially resulting in new development potentially requiring tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g, development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan.

Similar to the 2004 Housing Element, major themes of the 2009 Housing Element include the preservation and maintenance of existing housing. The following 2009 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the amount of new housing required to meet the City's housing needs and subsequent biological resource related impacts resulting from development at maximum allowable height and bulk limits.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply	Policy 2.3: Prevent the removal or reduction of housing for parking.	
	Policy 2.4: Promote improvements and continued maintenance to existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for existing occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3) to a degree similar to the 1990 Residence Element. The maintenance and preservation of existing housing would help to preserve the existing housing stock, requiring less new development to meet housing goals, thereby resulting in less development at maximum allowable height and bulk limits. 2009 Housing Element Policy 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3 are essentially the same as their corresponding 1990 Residence Element policies. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. The preservation of existing housing reduces the potential for new development to build to maximum allowable height and bulk limits, thereby reducing the potential for subsequent biological resource impacts resulting from new development at maximum allowable height and bulk limits.

The 2009 Housing Element does not propose policies that would directly or indirectly encourage development of areas with sensitive habitat or species. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are three areas under which the 2009 Housing Element promotes greater density than the 1990 Residence Element. These include the following themes: increasing density near transit; construction of affordable housing; and development through the community planning process. Neither the 2009 Housing Element nor the 1990 Residence Element propose increased density specifically for the Downtown area and, therefore, do not represent a shift in policy. Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to biological resources would be offset by compliance with the previously discussed regulations. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to biological resources.

Impact BI-2: The proposed Housing Elements would not conflict with any local policies or ordinances protecting biological resources nor would the proposed Housing Elements conflict with the provisions of an adopted habitat conservation plan. (No Impact)

2004 Housing Element and 2009 Housing Element Analysis

As discussed under Impact BI-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. The 2004 Housing Element directs growth to commercial and industrial areas, neighborhood commercial districts, the Downtown and on infill development sites, although to a greater degree than the 1990 Residence Element. The 2004 Housing Element also advocates for housing in community plan areas and along transit corridors, both of which are policies that were not included in the 1990 Residence Element.

Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density than the 1990 Residence Element. These include the following themes: increasing density for affordable housing projects and increased density as a strategy to be pursued during the community planning process. As shown above, the 2009 Housing Element promotes housing through community planning processes, near transit and other infrastructure, and in proximity to neighborhood services. The 2009 Housing Element also promotes housing on underused, vacant and surplus lands, and housing within mixed-use areas, thereby directing housing to commercial areas.

Directing growth to certain areas of the City and increased density could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass. In seeking to achieve the objectives of the proposed Housing Elements, significant impacts could result if new construction conflicts with local policies or ordinances protecting biological resources or an adopted conservation plan. Although the proposed Housing Elements would not result in the construction of residential units, it would shape how and where new residential development should occur and ensures that there is adequate land available to meet future housing needs. A key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. Both the 2004 Housing Element and 2009 Housing Element propose policies that discourage demolition and promote the maintenance of existing public housing to a degree similar to the 1990 Residence Element. The preservation of existing housing reduces the need for new development to maximum allowable height and bulk limits.

Neither the 2004 Housing Element nor the 2009 Housing Element contains policies that would directly or indirectly conflict with any policies protecting biological resources or any adopted habitat conservation plans. New residential development would be required to comply with the previously discussed regulations and plans, including the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code, San Francisco's Green Building Ordinance, San Francisco's IPM Ordinance, San Francisco's Urban Forest Plan, and San Francisco's Urban Forestry Ordinance. Development of the opportunity sites within the City would not fundamentally conflict with any applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP) because neither of these exists in the City. Furthermore, the proposed Housing Elements encourage higher density and infill development in already urbanized areas. Furthermore, the proposed Housing Elements would not result in conflicts with plans and policies related to the protection of biological resources because they would not directly or indirectly result in population growth or new development. Therefore, the 2004 and 2009 Housing Elements would have ***no impact*** with respect to conflicts with local plans or ordinances protecting biological resources or with the provisions of an adopted habitat conservation plan.

Cumulative Impacts

The geographic context for cumulative biological resources impacts are generally localized and affect the immediate vicinity surrounding development. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the project area or immediately adjacent to its project boundaries resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to biological resources. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing

Elements. The proposed Housing Elements provide direction for how residential development in the City should occur. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans that are intended to reduce impacts to biological resources. The 2004 Housing Element and 2009 Housing Element policies would not directly or indirectly affect biological resources. New development could affect such resources, but would be evaluated on a project-by-project basis. In addition, the 2004 Housing Element and 2009 Housing Element are public policy documents and would not result in direct significant impacts. The contribution of potential impacts from the proposed Housing Elements to the cumulative biological resource impacts would not be cumulatively considerable. Therefore, cumulative impacts related to biological resources would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

V. ENVIRONMENTAL SETTING AND IMPACTS
O. GEOLOGY AND SOILS

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to rupture of an earthquake fault, seismic ground shaking, ground failure, and landslides; substantial soil erosion; the stability of soil; the risks of expansive soil; adequate support of septic tanks; and topography and unique geologic or physical features.

ENVIRONMENTAL SETTING

Geologic Setting

Regional Geology

The City is within the San Francisco Bay Area, which is located within the Coast Ranges Geomorphic Province. Past episodes of tectonism have folded and faulted the bedrock, creating the regional topography of the northwest trending ridges and valleys characteristic of the Coast Ranges Geomorphic Province. The San Francisco Bay and vicinity occupy a structurally controlled basin within the province. Late Pleistocene and Holocene sediments (less than one million years old) were deposited in the basin as it subsided. The Franciscan Complex is a mixed assemblage of lithologically distinct bedrock types that are interbedded and tectonically disturbed. The bedrock is Cretaceous to Jurassic in age (65 to 165 million years old).

Local Geology

The City of San Francisco is primarily underlain by Franciscan Complex bedrock and surficial deposits such as dune sand and artificial fill. The bedrock comprises sedimentary and metamorphic rocks of the Franciscan formation, late Jurassic or Cretaceous in age. Surficial sedimentary deposits found in the City are primarily Holocene and Pleistocene artificial fill, dune sand, slope and ravine fill and undifferentiated Quaternary sedimentary deposits, and are described below.

- Artificial fill (Qaf) in the City consists of man made deposits of varying character, consisting of clay, silt, sand, rock fragments, organic material, and (or) man made debris. In the vicinity of Islais Creek and South Basin artificial fill is mapped over tidal flat deposits (Qaf/tf) and consists of clay, silt, sand, rock fragments, organic matter, and man-made debris that are placed over tidal flats.

- Dune sand (Qd) consists of loose to soft, well sorted sand deposits.

- Slope debris and ravine fill (Qsr) consists primarily of angular poorly sorted sediments with abundant rock fragments in a sand, silt, and clay matrix; generally light yellow to reddish-brown.

- Undifferentiated surficial deposits (Qu) found in the City include beach sand, marine deposits, artificial fill, alluvium, landslides, and, in the South San Francisco quadrangle, some Colma Formation.

- Franciscan Complex rocks (Jurassic and Cretaceous in age) underlying the City consist of sandstone, shale, serpentinite, mélange, and minor greenstone outcrops and are described below.

- Serpentinite (sp) (Jurassic) is the most abundant Franciscan Complex unit in the City and includes relatively fresh ultramafic rock as lenses and irregularly shaped masses, largely within and along boundaries of the mélange (fsr); most of the serpentinite in the City displays a prominent shear fabric. In the City, the serpentinite masses/blocks are part of the Hunters Point Shear Zone (HPSZ), an intra-Franciscan structural feature that consists of regionally extensive serpentinite bodies and shale matrix mélange, crossing the north eastern portion of the San Francisco Peninsula in the northwest-southeast.

- Franciscan Complex sandstone units in the City consist of Cretaceous interbedded sandstone, massive sandstone (Kfss), and thin-bedded sandstone and shale (Kfsh). Sandstone and interbedded shale, with minor conglomerate crops out in alternating sequence of largely medium-thick to very thick sandstone beds with generally minor interbedded shale and predominantly shale with interbedded thin to medium-thick sandstone beds. The massive sandstone unit is thick-bedded and massive graywacke sandstone interbedded with thin layers of fissile shale, fine-grained sandstone, and some thick conglomerate lenses. The thin-bedded sandstone and shale unit is predominantly interbedded and laminated shale and fine-grained sandstone with beds generally 5 to 13 cm thick.

- Small outcrops of greenstone are mapped near the southern portion of the City and consist of pillow lavas and less abundant tuff, breccia, and intrusive basalt, diabase, and rare gabbro.

- Franciscan mélange is mapped in small portions of the City and consists of a tectonic mixture of variably sheared shale and sandstone which contains inclusions of greenstone, chert, graywacke, and their metamorphosed equivalents, plus exotic high-grade metamorphic rocks and serpentinite.

Slope Stability

Slope failures include many phenomena that involve the downslope displacement and movement of material, either triggered by static (i.e., gravity) or dynamic (i.e., earthquake) forces, such as landslides, rock-fall, debris slides, and soil creep. Slope stability can depend on a number of complex variables including the geology, structure, and amount of groundwater, as well as external processes such as climate, topography, slope geometry, and human activity. The steeper the slope and/or the weaker the rock, the more likely the area is susceptible to landslides. Areas with steep slopes and thick colluvium would be more susceptible to debris flows. Areas susceptible to slope failures and instability can be identified on maps showing the steepness of slopes[1] when used in combination with a geologic map. Another indication of unstable slopes is the presence of old or recent landslides or debris flows. Landslides and other slope failures may occur on slopes of 15 percent or less; however, the probability is greater on steeper slopes that exhibit old landslide features such as scarps, slanted vegetation, and offset surfaces.

A large earthquake in San Francisco may cause movement of active slides and could trigger new slides similar to those that have already occurred under normal conditions. Figure V.O-1 identifies areas of the City vulnerable to landslides. As shown, landslide zones in the City are present in the following neighborhoods: Presidio, Lincoln Park, Pacific Heights, Nob and Russian Hill, the North Beach and North Waterfront, Central Waterfront, Mission Bay, Fort Funston/San Francisco State area, Merced Manor, Bayview, Hunter's Point, Visitacion Valley, Bay View Heights, Bernal Heights, and the neighborhoods comprising the central area of the City (Mission, Castro, Haight-Ashbury, etc.).

Soils

The soils underlying the City reflect the underlying geologic units, the extent of weathering of the underlying geologic units, the degree of slope, and the degree of modification by man. The City is primarily located within developed urban land where the near surface soils have been extensively modified by construction of buildings, roads, and other impermeable structures, and by cut and fill for these structures. Based on soil mapping performed by the United States Department of Agriculture's Natural Resources Conservation Service, two main soils types are mapped in the City: Urban Land and Orthents soils.[2] These soil types are found throughout the City in varying mixes of the two to form soil complexes.

- **Urban land.** This unit consists of areas where more than 85 percent of the surface is covered by asphalt, concrete, buildings and other structures. This unit is used for homesite, urban and recreational development.

- **Urban land-Orthents, cut and fill complex with 0 to 5 percent slopes.** This unit is on alluvial fans and flood plains. The Urban land consists of areas that are covered by asphalt, concrete, buildings, and other structures. The material covered by these structures is similar to the Orthents. The Orthent soils consists of soils that have been cut and filled for urban development and in many areas the texture of the surface layers varies greatly due to grading or mixture with fill. They are well drained, nearly level, and runoff is slow, resulting in a slight hazard for water erosion. Excavation for roads and buildings increases the risk of erosion. The unit has few limitations when used for homesite and urban development.

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[1] Graham and Pike, 1998.

[2] United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, Soil Survey of San Mateo County, Eastern Part, and San Francisco County, California (1991), website: http://websoilsurvey.nrcs.usda.gov/app/, accessed April 3, 2009.

- **Urban land-Orthents, reclaimed complex with 0 to 2 percent slopes.** This unit is primarily found in areas that were once part of San Francisco Bay and adjacent tidal flats. The Urban land consists of areas that are covered by asphalt, concrete, buildings, and other structures. The material covered by these structures is similar to the Orthents. The Orthent soils in this complex are made up of soil material, gravel, broken cement and asphalt, bay mud, and solid waste material and are very deep, poorly drained to somewhat poorly drained. Runoff is slow and hazard of water erosion is low. If the unit is used for urban and recreational development, the main limitations are the susceptibility of the soils to subsidence and the highly variable soil properties, including texture and permeability. A high water table is also a limitation in some areas.

Naturally Occurring Asbestos (NOA)

Asbestos is a naturally occurring mineral found in serpentinite rocks. Serpentine is a naturally occurring group of minerals that can be formed when ultramafic rocks are metamorphosed during uplift to the earth's surface. Serpentinite is a rock consisting of one or more serpentine minerals. This rock type is commonly associated with ultramafic rock along faults such as the Hayward Fault. Small amounts of chrysotile asbestos, a fibrous form of serpentine minerals, can be common in serpentinite. NOA refers to a variety of six fibrous materials. As discussed previously, serpentinite is the most abundant Franciscan Complex unit in the City and includes relatively fresh ultramafic rock as lenses and irregularly shaped masses. Refer to Section V.Q (Hazards and Hazardous Conditions) for a more detailed discussion of NOA and its potential as a hazardous material.

Expansive and Corrosive Soil

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Changes in soil moisture could result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay.

Corrosivity of soils is generally related to several key parameters: soil resistivity, presence of chlorides and sulfates, oxygen content, and pH. Typically, the most corrosive soils are those with the lowest pH and highest concentration of chlorides and sulfates. High sulfate soils are corrosive to concrete and may prevent complete curing reducing its strength considerably. Low pH and/or low resistivity soils could corrode buried or partially buried metal structures. Franciscan Complex shale generally weathers to clay, which can be expansive and corrosive to concrete and metal.

Erosion

The properties of soil which influence erosion by rainfall and runoff are ones which affect the infiltration capacity of a soil and those which affect the resistance of a soil to detachment and being carried away by falling or flowing water. Soils containing high percentages of fine sands and silt and that may have low in density are generally the most erodible. These soil types generally coincide with soils such as young alluvium and other surficial deposits. As the clay and organic matter content of these soils increases, the

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Figure V.O-1 Potential Housing Units: Capacity and Pipeline Units within Potential Landslide Zones

■ Potential Landslide Zones

Parks

Water

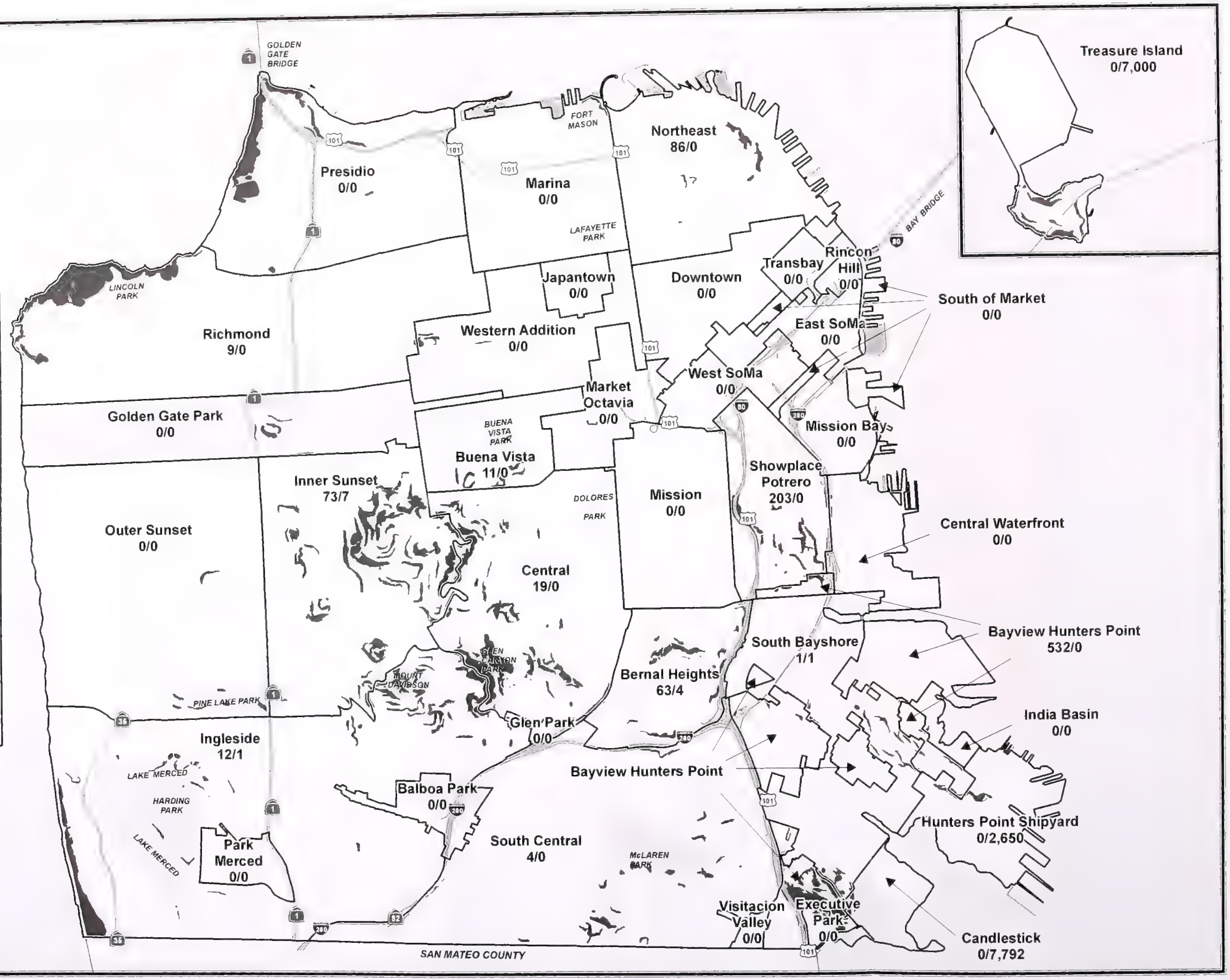
Notes

1 Numerical values represent housing capacity within potential landslide zones followed by net pipeline units within these zones (Housing Unit Capacity/ Pipeline Units), except as noted below

2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated

0 0.5 1 Mile

Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Potential Landslide Zones Association of Bay Area Governments July 2008



potential for erosion decreases. Clays act as a binder to soil particles, thus reducing the potential for erosion. However, while clays have a tendency to resist erosion, once eroded they are easily transported by water. Clean, well-drained, and well-graded gravels and gravel-sand mixtures are usually the least erodible soils. Soils with high infiltration rates and permeability reduce the amount of runoff. Areas of the City more susceptible to erosion are those not located on level topography.

Seismic Setting

The San Francisco Bay area is situated in a seismically active region (California Building Code Seismic Zone 4) near the boundary between two major tectonic plates, the Pacific Plate to the southwest and the North American Plate to the northeast. Over the last 23 million years, about 200 miles of right-lateral slip has occurred along the San Andreas Fault Zone to accommodate the relative movement between these two plates.

Figure V.O-2 shows the regional fault lines the San Francisco Bay Area. As shown, there are regional fault lines that run in a northwest/southeast direction located near the western shoreline of the City and in the East Bay. These faults can be classified as historically active, active, sufficiently active, or inactive,[3] as follows:

- Faults that have generated earthquakes accompanied by surface rupture during historic time (approximately the last 200 years) and faults that exhibit a seismic fault creep are defined as historically active.
- Faults that show geologic evidence of movement within Holocene time (approximately the last 11,000 years) are defined as active.
- Faults that show geologic evidence of movement during the Holocene along one or more of its segments or branches and if its trace may be identified by direct or indirect methods are defined as sufficiently active and well-defined.
- Faults that show direct geologic evidence of inactivity during all of Quaternary time or longer are classified as inactive.

Although it is difficult to quantify the probability that an earthquake will occur on a specific fault, this classification is based on the assumption that if a fault has moved during the last 11,000 years, it is likely to produce earthquakes in the future.

The San Francisco Bay Area contains several active faults that could cause strong ground shaking in the City. The San Andreas Fault is the primary component in a complex system of right-lateral, strike-slip faults; including the San Andreas, San Gregorio-Seal Cove, Hayward, and Calaveras faults; collectively known as the San Andreas Fault system. The San Andreas, San Gregorio-Seal Cove, Hayward, and

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[3] CGS, 1999.

Calaveras faults have produced measurable historic ground motion and movement. The San Andreas fault is capable of producing an earthquake of an estimated maximum magnitude of 7.9. This segment is estimated to have recurrence intervals on the order of 200 years. A summary of nearby active faults is shown in Table V.O-1.

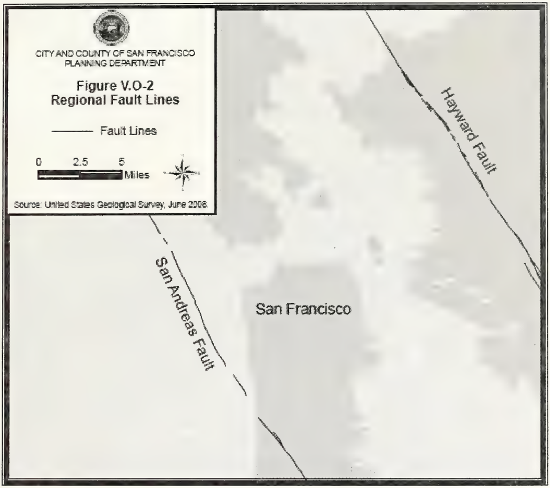
Table V.O-1
Active and Potentially Active Faults

Fault	Estimated Maximum Earthquake Magnitude	Historic Earthquakes	
		Year	Magnitude
San Andreas (1906 rupture)	7.9[1]	1906	7.9
San Andreas (Peninsula)	7.2	1838 1898 1989	6.8 6.2 7.1
San Andreas (North Coast)	7.5	NA	NA
San Gregorio-Seal Cove	7.4	NA	NA
Hayward	6.9	1868	6.8
Rodgers Creek	7.0	NA	NA
Calaveras	6.9	1861 1955 1979 1984 2007	5.3 5.5 5.9 6.1 5.4
Monte Vista-Shannon	6.7	NA	NA
Concord-Green Valley	6.7	NA	NA

Sources:
1. *Data determined from EQFAULT (Blake, 2000)*
2. *1906 rupture event assumes rupture of North Coast, Peninsula, and Santa Cruz Mtns. segments to San Juan Bautista. Maximum magnitude based on 1906 average 5 m displacement (WGCEP, 2003; Petersen et al., 1996).*

Fault Rupture

Faults are geologic zones of weakness. Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures associated with the 1906 San Francisco earthquake extended for more than 260 miles with displacements of up to 21 feet. However, not all earthquakes result in surface rupture. The Loma Prieta earthquake of 1989 caused major damage in the San Francisco Bay Area, but the fault did not break the ground surface. Fault rupture almost always follows preexisting faults. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. There are no earthquake faults, including faults as mapped under the Alquist-Priolo Fault Zone Act, within the City.



Ground Shaking

Structures in the City will likely experience severe ground shaking from a large earthquake on a nearby fault during its lifetime. An earthquake is classified by the amount of energy released, which traditionally has been quantified using the Richter scale. Seismologists have more commonly begun using a moment magnitude (Mw) scale because it provides a more accurate measurement of the size of major and great earthquakes. For earthquakes of less than Mw 7.0, the moment and Richter magnitude scales are nearly identical. For earthquake magnitudes greater than Mw 7.0, readings on the moment magnitude scale are slightly greater than a corresponding Richter magnitude.

The intensity of the seismic shaking, or strong ground motion, during an earthquake is dependent on the distance between a particular area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding that area. Earthquakes occurring on faults closest to the City would most likely generate the largest ground motions.

A description of the more severe Modified Mercalli Intensity (MMI) values is shown in Table V.O-2. Figures V.O-3 and V.O-4 show groundshaking maps for the San Andreas Fault and Hayward Fault, respectively. As shown in Figure V.O-3, areas with a MMI value of IX. Violent due to groundshaking caused by the San Andreas Fault are concentrated in the western portion of the City, along the northern and eastern shoreline of the City, in the Mission and Central neighborhoods, and Treasure Island. As shown in Figure V.O-4, areas with a MMI value of IX. Violent due to groundshaking caused by the Hayward Fault are concentrated in the eastern shoreline of the City and Treasure Island.

Table V.O-2
Modified Mercalli Intensity Scale

MMI Value	Full Description
V. Light	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.
VI. Moderate	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., fall off shelves. Pictures fall off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle).
VII. Strong	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
VIII. Very Strong	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
IX. Violent	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations.) Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters.
X. Very Violent	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.

Notes:
Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.
Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.
Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.
Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

Source: Association of Bay Area Governments, Modified Mercalli Intensity Scale, website: http://www.abag.ca.gov/bayarea/eqmaps/doc/mmi.html, March 24, 2010. Original source for full descriptions are from: Richter, C.F., 1958. Elementary Seismology. W.H. Freeman and Company, San Francisco, pp. 135-149; 650-653.

A review of historic earthquake activity from 1800 to 2005 indicates that 13 earthquakes of magnitude Mw 6.0 or greater have occurred within and near the City within this time frame. A summary of significant and/or damaging earthquakes is presented in Table V.O-3. There have also been an additional 25 earthquakes with magnitudes between Mw 5.5 and Mw 6.0 in this area during this time period, including numerous aftershocks of larger earthquakes.

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Figure V.O-3
Groundshaking Map for the San Andreas Fault

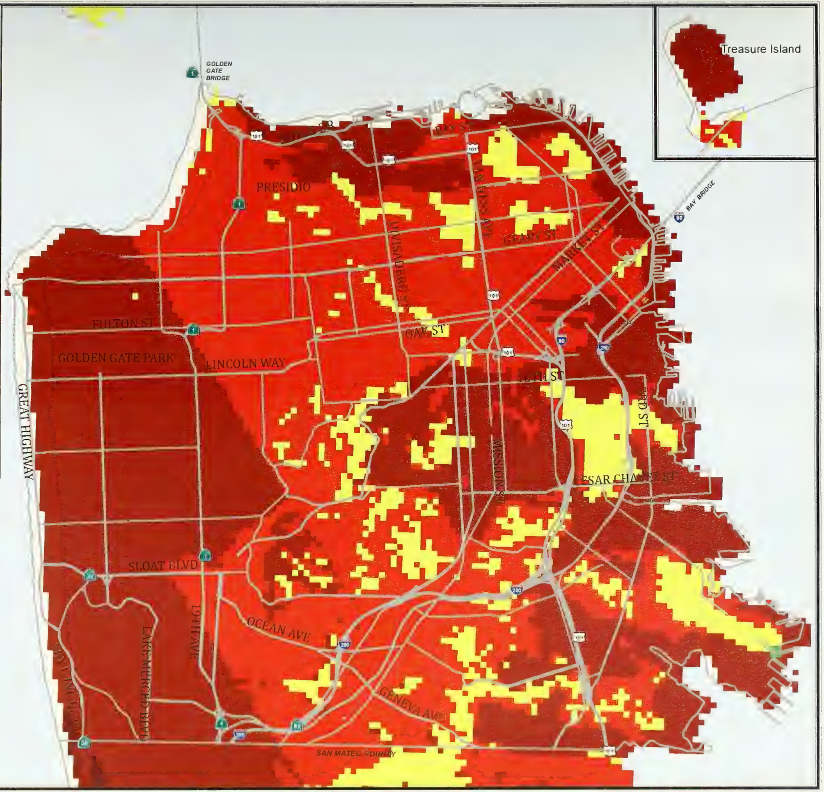
- 🟩 VI - Moderate
- 🟨 VII - Strong
- 🟥 VIII - Very Strong
- 🟥 IX - Violent
- 🟫 X - Very Violent

Notes:

1. Shaking intensity data provided by Association of Bay Area Governments (ABAG).

2. Shaking intensities relate to the 1906 Earthquake.

3. Shaking intensity levels defined by Modified Mercalli Intensity (MMI) Values.



Source: CCSF Department of Technology, January 2010

CITY AND COUNTY OF SAN FRANCISCO
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Figure V.O-4 Groundshaking Map for the Hayward Fault

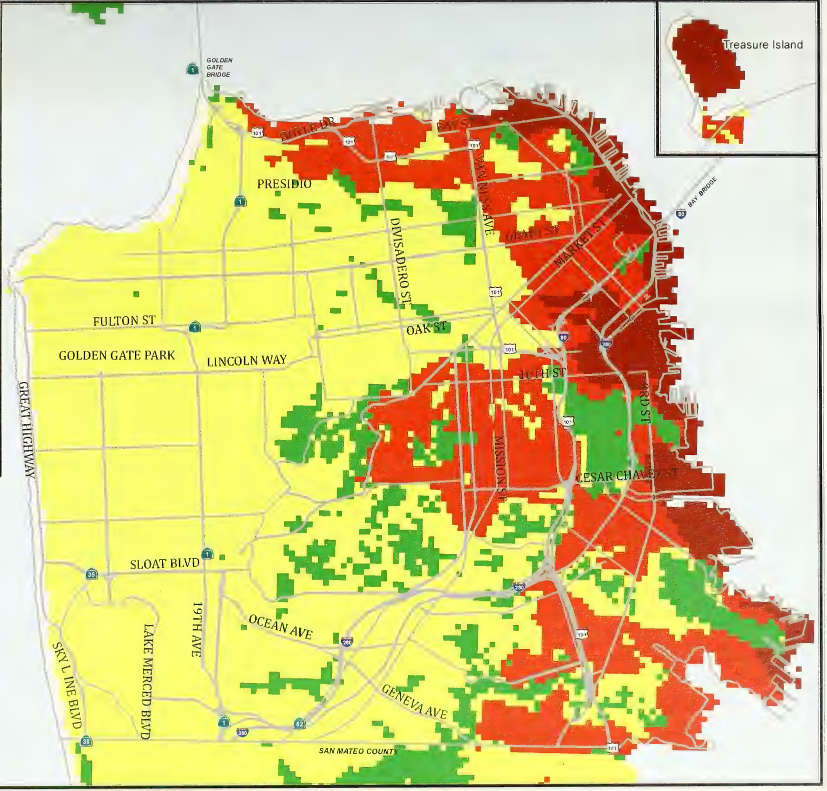
- 🟩 VI - Moderate
- 🟨 VII - Strong
- 🟥 VIII - Very Strong
- 🟥 IX - Violent

Notes:

1. Shaking intensity data provided by Association of Bay Area Governments (ABAG).

2. Shaking intensities relate to the ABAG North & South Hayward Fault shaking scenario.

3. Shaking intensity levels defined by Modified Mercalli Intensity (MMI) Values.



Source CCSF Department of Technology, January 2010

Table V.O-3
Significant Historic Earthquakes

Date	Earthquake Magnitude[1]	Name, Location, or Region Affected	Associated Fault	Comments[2]
June 1838	Assumed between 6.8 and 7.4	San Francisco Area	San Andreas	This earthquake is associated with probable rupture of the San Andreas fault from Santa Clara to San Francisco (approximately 37 miles). Walls were cracked at Mission Dolores and in Monterey.
October 8, 1865	6.5	Santa Cruz Mountains	San Andreas	Caused severe damage in New Almaden, Petaluma, San Francisco, San Jose, Santa Clara, and Santa Cruz resulting in $500,000 in property damage. Ground cracks, heaving, and subsidence were noted in several areas.
October 21, 1868	6.8	Hayward	Hayward	Felt throughout northern California and Nevada. Resulted in 30 deaths and $300,000 in property damage. Occurred on the Hayward fault with rupture from Berkeley to Fremont. Caused severe damage in the East Bay and San Francisco, destroyed. Destroyed Mission San Jose. USGS estimates Mw 7.0.
June 20, 1897	6.2	Gilroy	Calaveras	Felt from Woodland to San Luis Obispo. Resulted in building collapse in the Santa Clara Valley. Fissures were noted on the Calaveras fault southeast of Gilroy.
April 18, 1906	7.8	San Francisco Earthquake, San Francisco	San Andreas	This earthquake and the resulting fires caused approximately 3,000 deaths and $524 million in damage ($24 million from the earthquake alone). Destruction from this earthquake occurred at distances of up to 350 miles from the epicenter.
July 1, 1911	6.4	Morgan Hill	Calaveras	Located on the Calaveras fault, caused substantial damage in Gilroy and the Santa Clara Valley. Felt as far away as Reno, Nevada.
January 24, 1980	5.8	North of Livermore Valley	Greenville	Occurred on the Greenville fault with surface rupture of approximately nine miles. Resulted in numerous injuries and $11.5 million in property damage (primarily at Lawrence Livermore Laboratory).
April 24, 1984	6.2	Morgan Hill Earthquake, Morgan Hill	Calaveras	Earthquake was felt from San Francisco to Bakersfield and was located near the epicenter of the 1911 earthquake in Morgan Hill. Resulted in injuries and approximately $8 million in property damage.

Table V.O-3
Significant Historic Earthquakes

Date	Earthquake Magnitude[1]	Name, Location, or Region Affected	Associated Fault	Comments[2]
October 17, 1989	6.9	Loma Prieta Earthquake, Santa Cruz Mountains	San Andreas	Largest earthquake to occur on the San Andreas fault since 1906. Resulted in 63 deaths, more than 3,000 injuries, and an estimated $6 billion in property damage. Severe damage occurred from San Francisco to Monterey and in the East Bay, and included damage and destruction of buildings, roads, bridges, and freeways.

Notes:

[a] *Earthquake magnitudes and locations before 1932 are estimated by Real et al., 1978, and Toppozada et al., 1981 and 1982 based on reports of damage and felt effects. Magnitudes reported using the Richter scale.*

[b] *Earthquake damage information primarily compiled from the National Earthquake Information Center and the Berkeley Seismological Laboratory websites. Estimates of property damage values are in dollars valued to the year of damage.*

The intensity of earthquake-induced ground motions can be described using horizontal peak ground accelerations, represented as a fraction of the acceleration of gravity (g). The interactive United States Geological Survey (USGS) Earthquake Ground Motion Parameter Java Application[4] provides data to estimate horizontal peak ground accelerations in California. Taking into consideration the uncertainties regarding the size and location of earthquakes and the resulting ground motions that can affect a particular site, the map depicts peak ground accelerations with a 10 percent probability of being exceeded in 50 years, which equals an annual probability of one in 475 of being exceeded each year. Based on this data, the horizontal peak ground acceleration in the City is estimated to be between approximately 0.5g to 0.6g for an earthquake having a 10 percent probability of exceedance in 50 years.

Liquefaction

Liquefaction is a phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced, strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude of earthquakes likely to affect the site. Saturated, unconsolidated silts, sands, silty sands, and gravels within 40 feet of the ground surface are most susceptible to liquefaction.[5] Liquefaction-related phenomena include vertical settlement from densification, lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects.

Figure V.O-5 identifies areas of the City with geologic and ground-water conditions conducive to liquefaction. Liquefaction zones are widespread in the San Francisco area near the coastal and bay side

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[4] USGS, 2008a.

[5] CGS, 2000a.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

Figure V.O-5 Potential Housing Units: Capacity and Pipeline Units within Potential Liquefaction Zones

▨ Potential Liquefaction Zones

Parks

Water

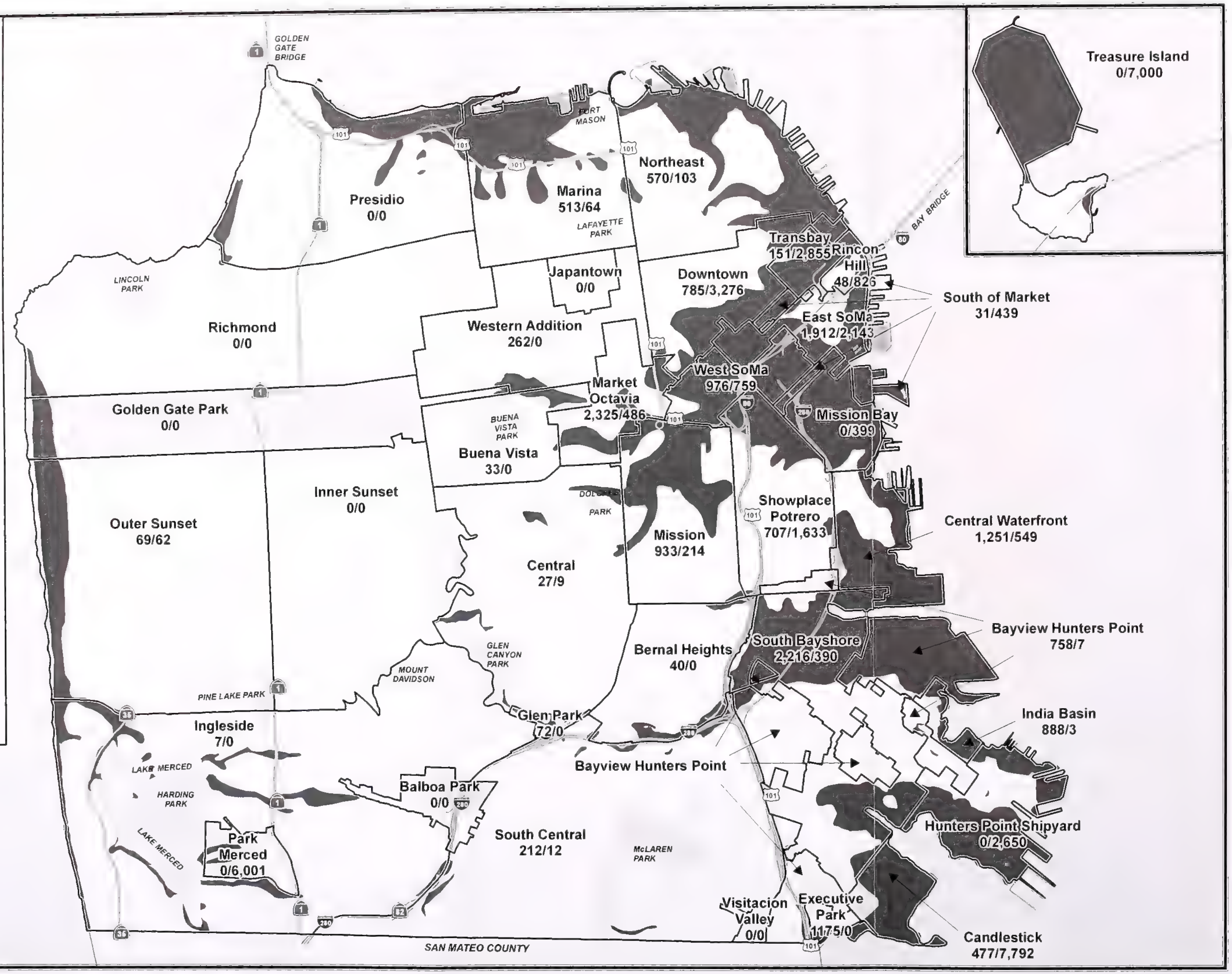
Notes

1 Numerical values represent housing capacity within potential liquefaction zones followed by net pipeline units within these zones (Housing Unit Capacity/ Pipeline Units), except as noted below

2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated

0 0.5 1 Mile

Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Potential Liquifaction Zone Association of Bay Area Governments May 2008



areas underlain by saturated young sedimentary units and artificial fill.[6] As shown, liquefaction zones in the City are present in the following neighborhoods: North Beach, Fisherman's Wharf, the Presidio, the eastern portion of the Financial District including the eastern slopes of Nob Hill, South Beach, Ocean Beach, the Outer Sunset, and Fort Funston/San Francisco State Area. In addition, the opportunity for strong ground shaking is high because of the many nearby active faults. Liquefaction hazard zones are more susceptible to ground failure. Ground failure associated with liquefaction has occurred during historical earthquakes in San Francisco. Liquefaction-related phenomena may occur in areas with loose granular sediments where depth to ground water is 40 feet or less during moderate to great earthquakes.

Lateral Spreading

Of the liquefaction hazards, lateral spreading generally causes the most damage. This is a phenomenon where large blocks of intact, non-liquefied soil move downslope on a liquefied substrate of large aerial

extent.[7] The mass moves toward an unconfined area, such as a descending slope or stream cut bluff, and can occur on slope gradients as gentle as one degree. The topography of the City varies drastically; relatively flat areas are not as susceptible to lateral spreading as those areas located on a slope. Lateral spreading may occur in sloping areas where liquefaction hazards are mapped in the event of a large earthquake. Much of the City's liquefiable soils are in the SoMa area, which is flat and most of the soil in this area is fill. Due to these factors, lateral spreading in this area is common.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, uncompacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas underlain by poorly consolidated and/or poorly mixed fill, with varying materials near the waterfront areas, may be susceptible to settlement during moderate to great earthquakes.

Seismic Slope Instability/Ground Cracking

Earthquake motions can also induce substantial stresses in slopes, causing earthquake induced landslides or ground cracking when the slope fails. Earthquake-induced landslides can occur in areas with steep slopes that are susceptible to strong ground motion during an earthquake. The 1989 Loma Prieta earthquake triggered thousands of landslides over an area of 770 square miles. According to the seismic hazard maps published by the California Geological Survey (CGS),[8] most of the City does not contain areas where landslide movement has previously occurred. Local topographic conditions do not indicate a significant potential for permanent ground displacements due to earthquake-induced landslides. However, areas of the City with gentle to moderate slopes, such as the Mount Sutro area, Seacliff, Potrero District, and Hunters Point, are susceptible to earthquake induced landslides or slope failures.

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[6] City of San Francisco Planning Department. San Francisco General Plan Community Safety Element, Map 4 – Seismic Hazards Study Zones – Areas of Potential Liquefaction.

[7] Youd et al., 1978; Tinsley et al., 1985.

[8] CGS, 2001.

Unreinforced Masonry Buildings

Older buildings in San Francisco constructed of masonry (typically brick) without the benefit of reinforcement are referred to as Unreinforced Masonry Buildings (UMBs). The Department of Building Inspection (DBI) maintains a master list of over 2,000 UMBs citywide. UMBs are considered "hazardous" in an earthquake because they often fail structurally, resulting in the collapse of walls or the entire building. Refer to the regulatory setting for a discussion of the City's UMB Ordinance.

REGULATORY SETTING

Federal

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program. To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by the National Earthquake Hazards Reduction Program Act (NEHRPA) by refining the description of agency responsibilities, program goals, and objectives.

The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and the U. S. Geological Survey.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults.

The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The act requires the State Geologist to establish regulatory zones known as "earthquake fault zones" around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and/or counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. There are no Alquist-Priolo Fault Zones within the City of San Francisco.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) addresses earthquake hazards, including liquefaction and seismically induced landslides. The Act established a mapping program for areas that have the potential for liquefaction or earthquake-induced landslides. When development projects are proposed within a Seismic Hazards Studies Zone (SHSZ), the proponent is required to conduct a site investigation and prepare a geotechnical report assessing the nature and severity of the hazard, and suggesting appropriate mitigation measures. When approving any project in a SHSZ, the City of San Francisco will use the information and recommendations included in the report to achieve a reasonable protection of public safety. Portions of City are within a SHSZ.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board (SWRCB) administers regulations promulgated by the U. S. Environmental Protection Agency requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES), which serves in part to reduce soil erosion and the loss of topsoil from construction. In turn, SWRCB's jurisdiction is administered through nine regional water quality control boards. Under these federal regulations, a developer must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or more. The general permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a Storm Water Pollution Prevention Plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction.

California Building Standards Code

The State of California provides minimum standards for building design through the California Building Standards Code (CBC). Where no other building codes apply, the CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC) used widely throughout the country. The CBC has been modified for California conditions with numerous more detailed and/or more stringent regulations.

The state earthquake protection law requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in CBC Chapter 16. The Code identifies seismic factors that must be considered in structural design.

Chapter 18 of the CBC regulates the need for geotechnical investigations for the excavation of foundations and retaining walls, to ensure stable excavations and cut or fill slopes created by grading activities, including drainage and erosion control, and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to geology and soils are discussed in Section V.A (Plans and Policies) of this Draft EIR. General Plan objectives and policies discussed in this Section are as follows:

Policy 2.1: Assure that new construction meets current structural and life safety standards.

Policy 2.6: Reduce the earthquake and fire risks posed by older small wood-frame residential buildings.

Policy 2.9: Consider information about geologic hazards whenever City decisions that will influence land use, building density, building configurations or infrastructure are made.

San Francisco Building Code

The full 2007 San Francisco Building Code consists of the 2006 International Building Code, as amended by the 2007 California Building Code, and as further amended by these San Francisco amendments. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, access to persons with disabilities, sanitation, adequate lighting and ventilation and energy conservation, and safety to life and property from fire and other hazards attributed to the built environment; to regulate and control the demolition of all buildings and structures, and the quarrying, grading, excavation, and filling of land; and to provide safety to fire fighters and emergency responders during emergency operations.

The City Code contains specific codes related to seismic hazards and upgrades, including Chapter 16B, Chapter 16C, and Chapter 16D which outlines measures to reduce earthquake hazards in UMBs, seismic strengthening provisions for UMBs, and for the stabilization of parapets or appendages.

Chapter 16B and Chapter 16C of the 2001 San Francisco Building Code requires all UMB property owners to retain a licensed civil structural engineer or architect to file a Building Inventory Form with the city to identify the "hazard class" of the building. The Building Code requires all owners of UMBs to seismically upgrade buildings by February 15, 2006. Unreinforced masonry buildings of single-family occupancy and multi-unit apartments containing fewer than five dwelling units or guest rooms used solely for residential purposes are exempted from these requirements. Exterior alterations, seismic retrofit, and/or demolition of UMBs are evaluated by the Planning Department before approval of a building permit application.

Chapter 16D requires that parapets or appendages which are supported on or attached to an exterior wall of a building adjacent to a property line, passageway, open courtyard or public way or which occurs in any other location where failure of such parapet or appendage would be hazardous to life or limb in such areas shall, when required by the Building Official, be subject to inspection by a licensed architect or civil engineer employed by the owner. The code is retroactive and applies to and includes buildings erected prior to the adoption of the code.

Department of Building Inspection

Section 2697 of the previously discussed Seismic Hazards Mapping Act mandates that, prior to the approval of a project in a seismic hazard zone, the City must require the preparation of a geotechnical report defining and delineating any seismic hazard. The California Geological Survey has published Special Publication 117A, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, to assist the engineering geologist and/or civil engineer who must investigate the site and recommend mitigation of identified earthquake-related hazards and to promote uniform and effective statewide implementation of the evaluation and mitigation elements of the Seismic Hazards Mapping Act. Under the act, DBI, the local permitting authority, must regulate certain development projects within the mapped hazard zones. For projects in a hazard zone, DBI requires that the geologic and soil conditions of the project site are investigated and appropriate mitigation measures, if any, incorporated into development plans. "Mitigation" is defined as those measures that are consistent with established practice and reduce seismic risk to acceptable levels.[9] "Acceptable level" of risk is defined as that level that provides reasonable protection of public safety, although it does not necessarily ensure continued structural integrity and functionality of a building.[10]

San Francisco Interdepartmental Review

Interdepartmental project reviews are mandatory for new construction projects that propose buildings eight stories or more and/or new construction on parcels identified by the State of California Department of Conservation, Division of Mines and Geology as Seismic Hazard Zones in the City and County of San Francisco. Projects identified as such must request and participate in an interdepartmental project review prior to any application that requires a public hearing before the Planning Commission or new construction building permit. The Planning Department acts as the lead agency in collaboration with the DBI; the DPW; and the SFFD.

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[9] Public Resources Code, Section 2693(c).

[10] California Code of Regulations, Title 14, Section 3721(a).

Industrial Waste Ordinance (Ordinance No. 199-77)

The San Francisco Industrial Waste Ordinance requires that groundwater meet specified water quality standards before it may be discharged into the sewer system. The Bureau of Systems Planning, Environmental and Compliance of the San Francisco Public Utilities Commission must be notified of projects necessitating dewatering. Should dewatering be necessary, the final soils report would address the potential settlement and subsistence impacts of this dewatering.

Unreinforced Masonry Buildings Ordinance

Adopted by the Board of Supervisors in 1992, UMB Ordinance No. 225-92 requires the City to notify all owners of UMBs and requires all property owners to retain a licensed civil structural engineer or architect to file a Building Inventory Form with the City to identify the “hazard class” of a particular UMB building. The ordinance also requires all owners of UMBs to seismically upgrade buildings by February 15, 2006. Building owners are responsible for financing the cost of the work.

The UMB ordinance spells out four different alternative standards for seismic strengthening of UMBs. Each standard requires a different level of construction and range of costs. The ordinance also specifies conditions that must be met if either of the two less extensive and costly approaches is used to seismically upgrade a UMB. The DBI, who is charged with oversight and enforcement of the program, also has the authority to initiate abatement proceedings in cases where an owner fails to seismically upgrade a building.

Exterior alterations, seismic retrofit and/or demolition of UMBs must be evaluated by the Planning Department in order to determine the type of review process required prior to the authorization of a building permit application. Some projects, however, may be approved administratively. Seismic retrofitting of UMBs is guided by the *Architectural Design Guidelines for the Exterior Treatment of Unreinforced Masonry Buildings During Seismic Retrofit*, developed by the American Institute of Architects.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology Special Publication 42.)

  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or
- Change substantially the topography or any unique geologic or physical features of the site.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the Regional Housing Needs Allocation (RHNA) as determined by the Association of Bay Area Governments (ABAG). Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. The 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

The San Francisco Bay Area and surrounding areas are characterized by numerous geologically young faults. However, there are no known fault zones or designated Alquist-Priolo Earthquake Fault Zones in the City. Therefore, the proposed Housing Elements would have ***no impact*** with respect to rupture of a known earthquake fault.

Although the proposed Housing Elements would not result in the construction of residential units, all new development would be connected to the City's existing wastewater treatment and disposal system. Development would not involve the use of septic tanks or alternative wastewater disposal systems.

Therefore, the proposed Housing Elements would have ***no impact*** with respect to septic tanks or alternative wastewater disposal systems.

Impact GE-1: The proposed Housing Elements would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides. (Less than Significant)

New construction could result in impacts related to substantial adverse effects related to a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure (including liquefaction and landslides), if new housing would result in construction on or near an earthquake fault, liquefiable soils, or areas prone to landslides. New housing could also increase density in especially geologically hazardous areas. Figures V.O-1 and V.O-5 show the available housing unit capacity and pipeline units that are anticipated to be developed, or have the potential for residential development, within landslide and liquefaction hazard zones, respectively. Landslide and liquefaction hazard zones are also more susceptible to ground failure, as previously discussed. According to this data, approximately 10,455 units in the City's pipeline occur within landslide zones, with the capacity for another 1,013 units. The areas of the City most susceptible to landslide hazards are the Candlestick, Hunters Point Shipyard, and Bayview Hunters Point neighborhoods. Approximately 37,672 units in the City's pipeline occur within liquefaction zones, with the capacity for another 16,438 units. The areas of the City most susceptible to liquefaction hazards are the Candlestick, Treasure Island, and Park Merced neighborhoods. The potential for the proposed Housing Elements to expose people or structures to a hazard risk from rupture of an earthquake fault, seismic ground shaking or ground failure from liquefaction or landslides is discussed below.

2004 Housing Element Analysis

The following 2004 Housing Element policies could result in the exposure of people to strong seismic ground shaking and seismic-related ground failure, including liquefaction, or landslides by increasing density in areas susceptible to these hazards, thereby exposing additional persons to these hazards.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	neighborhood scale and character where there is neighborhood support.	lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only	Implementation Measure 1.1.3: Inclusion of housing in Downtown.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	incases where in return the development will provide major public benefits to the community.	
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	support and input from local neighborhoods.	
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 2004 Housing Element also encourages new housing through on-going and future community planning processes (Policies 1.1, 11.6 and Implementation Measures 1.3.1, 1.3.2, 1.6.2, and 2.4.2) and on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4). The 1990 Residence Element similarly directs growth to commercial and industrial areas, neighborhood commercial districts, the Downtown and on infill development sites, although to a lesser degree than the 2004 Housing Element. The 2004 Housing Element also advocates for housing in community plan areas and along transit corridors, both of which are policies that were not included in the 1990 Residence Element. Policies that direct growth to certain areas of the City could consolidate new construction in areas of the City susceptible to hazards, including liquefaction hazards, seismic hazards, and landslide hazards.

The 2004 Housing Element promotes increased building densities more so than the 1990 Residence Element. The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and

Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, which could result in new construction in areas of the City susceptible to hazards, including liquefaction hazards, seismic hazards, and landslide hazards.

Measures that encourage development of new housing could result in increased housing construction and increased density these hazard areas. However, the 2004 Housing Element would not specifically direct planning or increased development to higher risk areas. With respect to these higher risk areas, the following area plans have been undertaken: Northeastern Waterfront, Downtown, Rincon Hill, SoMa, East SoMa, Market and Octavia, Mission, Showplace Square/Potrero, Central Waterfront, and Bayview Hunters Point. Although increased density and new construction in these areas could potentially expose additional persons to these hazards, new construction would be developed in a seismically sound manner and would comply with building regulations for seismic safety that are enforced through the City's interdepartmental review process previously discussed. Increased density could also result in heavier buildings, which would require stronger and deeper foundations in geologically hazardous areas, further protecting occupants of these buildings.

Furthermore, the following 2004 Housing Element policies could reduce the 2004 Housing Element's effects on the potential for the exposure of people to strong seismic ground shaking and seismic-related ground failure, including liquefaction, or landslides by promoting seismic upgrades, mandating retrofits of UMB, and developing a Community Action Plan for Seismic Safety (CAPSS).

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Promotes seismic upgrades/retrofits, maintenance of existing housing, and correction of code violations.	Policy 3.1: Ensure that existing housing is maintained in a decent, safe, and sanitary condition without increasing rents or displacing low-income households.	Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary condition at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
	Policy 3.4: Monitor the correction of serious continuing code violations to prevent the loss of housing.	Policy 5.3: Assure correction of serious continuing code violations and loss of housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 3.5: Improve the seismic stability of existing housing without reducing the supply of affordable housing.	Objective 4: To reduce the risk of bodily harm and the loss of housing in an earthquake Policy 4.3: Improve the seismic stability of existing housing. Policy 4.2: Reduce seismic hazards in unreinforced masonry building without reducing the supply of affordable housing.
Continue to mandate seismic retrofits of UMB.	Implementation Measure 3.5.2: The City Department of Building Inspection (DBI) will continue to mandate the seismic retrofit of unreinforced masonry buildings.	
CAPSS, which could reduce impacts related to potential earthquakes.	Implementation Measure 3.5.3: The DBI is also developing a Community Action Plan for Seismic Safety (CAPSS) which is investigating the impacts of potential earthquakes and developing policies and programs to reduce these impacts.	

As shown above, both the 2004 Housing Element and the 1990 Residence Element recognize the need for seismically sound housing. 2004 Housing Element Policies 3.1, 3.3, 3.4, and 3.5 are essentially the same as their corresponding 1990 Residence Element policies and would not represent a policy shift. 2004 Housing Element Implementation Measure 3.5.2 does not represent a policy change from the current practices of the DBI. Both the 1990 and 2004 Housing Elements recognize the need for seismically sound housing and therefore do not represent a policy shift. Any ordinances proposed by DBI, in response to the revision to the CAPSS program addressed in Implementation Measure 3.5.3 would require a separate environmental review. Furthermore, the ability of new construction to withstand such hazards is adequately addressed at the project-level through the permit review process. During the permit review process, DBI would ensure that new buildings meet the standards for the protection of life and safety standards and all new development would be required to comply with these specifications.

Older buildings in the City can include UMBs, which are considered “hazardous” in an earthquake because they often fail structurally, resulting in the collapse of walls or the entire building. Seismic upgrades, including upgrades to UMBs would reduce seismic hazards and exposure of people and structures to seismic hazards. Additionally, all UMB’s in the City previously surveyed as part of the UMB survey would be required to comply with the City’s UMB ordinance (previously discussed), requiring seismic retrofits.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density would be offset by compliance with the previously discussed regulations, including the San Francisco Building Code (Building Code), Earthquake Hazards Reduction Act, Alquist-Priolo Earthquake Fault Zoning Act, and Seismic Hazards Mapping Act of 1990. The State of California provides minimum standards for building design through the CBC. The CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC) used widely throughout the country. The CBC has been modified for California conditions with numerous more detailed and/or more stringent regulations. The Code identifies seismic factors that must be considered in structural design.

Additionally, the Building Code includes regulations that would further reduce this impact, including compliance with the City's Code which contains specific codes related to seismic hazards and upgrades. Compliance with the Building Code is mandatory for development in San Francisco. Throughout the permitting, design, and construction phases of a building project, Planning Department staff, DBI engineers, and DBI building inspectors confirm that the Building Code is being implemented by project architects, engineers, and contractors. During the design phase for future residential development, foundation support and structural specifications based on the preliminary foundation investigations would be prepared by the engineer and architect and would be reviewed for compliance with the Building Code by the Planning Department and DBI. Although some 2004 policies could potentially increase the effect of this hazard by increasing the allowable density, DBI in its permit review process would ensure that buildings meet specifications for the protection of life and safety and all new development would be required to comply with the previously discussed federal, state, and local regulations. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the exposure of people to strong seismic ground shaking and seismic-related ground failure, including liquefaction, or landslides.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

The following density-related 2009 Housing Element policies could potentially result in the exposure of people to strong seismic ground shaking and seismic-related ground failure, including liquefaction, or landslides by increasing density in areas susceptible to these hazards, thereby exposing additional persons to these hazards.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards.	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure (Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80), thereby directing housing to commercial areas. Policies that direct growth to certain areas of the City could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing the exposure of persons to seismic hazards may similarly increase.

The 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). Overall, the 2009 Housing Element does not promote increased density more so than the 1990 Residence Element. While the 2009 Housing Element contains a policy that advocates for family-sized housing units (Policy 4.1 and Implementation Measure 32), overall density increases from such policy would be speculative as less units would be accommodated within a given building envelope. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk limits, potentially increasing the exposure of persons to seismic hazards may similarly increase.

However, new residential construction would be developed in a seismically sound manner and would comply with building regulations for seismic safety that are enforced through the City's interdepartmental review process previously discussed. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. Therefore, when taken as a whole, the 2009 Housing Element would have less of a potential to result in density-related seismic impacts as the 2004 Housing Element.

Furthermore, the following 2009 Housing Element policies could further reduce the 2009 Housing Element's effects on the potential for the exposure of people to strong seismic ground shaking and seismic-related ground failure, including liquefaction, or landslides by identifying suitable housing sites and supporting seismic upgrades.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
Seismic upgrades to existing housing would increase safety for residents.	Policy 2.5: Encourage and support the seismic retrofitting of the existing housing stock.	Objective 4: To reduce the risk of bodily harm and loss of housing in an earthquake Policy 4.3: Improve the seismic stability of existing housing.
	Implementation Measure 21: Through Community Action Plan for Seismic Safety (CAPSS), DBI shall develop and adopt a program which mandates seismic upgrades for "soft-story" buildings.	Objective 4: To reduce the risk of bodily harm and loss of housing in an earthquake Policy 4.3: Improve the seismic stability of existing housing.
	Strategy 8: As a part of the CAPPS Program, DBI should evaluate the need for revisions to the San	Policy 4.3: Improve the seismic stability of existing housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
	Francisco Building Code; the need for the retrofit of designated shelters or the determination of alternate seismically safe locations; and the need for mitigation programs for critical non-ductile concrete buildings	

As shown above, both the 2009 Housing Element and the 1990 Residence Element recognize the need for seismically sound housing. 2009 Housing Element Policy 2.5, Implementation Measure 21, and Strategy 8 are essentially the same as their corresponding 1990 Residence Element policies and would not represent a policy shift. Essentially both the 1990 and 2004 Housing Elements recognize the need for seismically sound housing and therefore do not represent a policy shift.

Similar to the 2004 Housing Element, major themes of the 2009 Housing Element include the preservation and maintenance of existing housing. The following 2009 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the amount of new housing required to meet the City's housing needs and subsequent seismic hazards impacts resulting from development at maximum allowable height and bulk limits, potentially increasing building height and mass.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply	Policy 2.3: Prevent the destruction or reduction of housing for parking.	
	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3) to a degree similar to the 1990 Residence Element. The maintenance and preservation of existing housing would help to preserve the existing housing stock, requiring less new development to meet housing goals, thereby resulting in less development at maximum allowable height and bulk limits. 2009 Housing Element Policy 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3 are essentially the same as their corresponding 1990 Residence Element policies. 2009 Housing Element Policy 13.4 expands upon 1990 Residence Element Policy 7.5 by promoting the preservation of existing buildings. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

Furthermore, the effect of increasing the number of people exposed to hazards by promoting increased density is addressed during the permit review process. In the permit review process, DBI would ensure that new buildings meet the standards for the protection of life and safety standards and all new development would be required to comply with these specifications. Although the 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with the previously discussed federal, state, and local regulations. DBI, in its permit review process, would ensure that new construction and seismic retrofits met life safety standards. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the exposure of people to strong seismic ground shaking and seismic-related ground failure, including liquefaction, or landslides.

Impact GE-2: The proposed Housing Elements would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

New construction could result in impacts related to soil erosion and the loss of topsoil if new housing, particularly on vacant or undeveloped sites, would result in grading activities, or if new development would require much more extensive grading. This exposure could result in erosion or loss of topsoil. The 2004 and 2009 Housing Element policies that promote increased density could result in heavier buildings on soil types or in proximity to slopes that are susceptible to erosion. Heavier buildings would require stronger and deeper foundations, involving more excavation than lighter buildings.

2004 Housing Element Analysis

As discussed under Impact GE-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. (See 2004 Housing Element Policies 1.1, 1.6, 1.7, 1.8, 4.4, 4.5, 11.6, 11.7, 11.8, 11.9 and Implementation Measures 1.1.1, 1.3.1, 1.6.2, 1.8.1, 1.8.3, 4.4.1, 11.6.1 and 11.7.1.) Directing growth to certain areas of the City and increased density could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass compared to exiting buildings. In addition, new construction could result in impacts related to erosion and the loss of topsoil by promoting housing construction on undeveloped sites. Both the potential for heavier buildings and the construction of housing on vacant or undeveloped sites could result in erosion or the loss of topsoil due to the need for extensive grading.

As discussed under Impact GE-1, the 2004 Housing Element proposes policies that promote development on undeveloped sites to the same extent as the 1990 Residence Element. 2004 Housing Element Policy 1.5 does not represent a policy shift from 1990 Residence Element Policy 1.1. The City's soft site analysis is essentially the identification of the underutilized and vacant sites, which is the subject of 2004 Implementation Measure 4.1.4. A portion of 2004 Implementation Measure 4.1.4 is similar to 2004 Housing Element Implementation Measure 1.3.3 with respect to development of Brownfield sites, which is not viewed as a policy shift. Therefore, the 2004 Housing Element would result in grading activities to an extent similar to the 1990 Residence Element and would result in a similar amount of erosion or loss of topsoil. In addition, as discussed under Impact GE-1, 2004 Housing Element Policies 3.1, 3.3, and 3.4 would retain existing housing by promoting seismic upgrades/retrofits, maintenance of existing housing, and correction of code violations to a degree similar to the 1990 Residence Element. The preservation of existing housing reduces the pressure for new housing development that could result in increased soil erosion or loss of topsoil. However, as discussed under Impact GE-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 would promote increased density compared to the 1990 Housing Element. Construction associated with housing could potentially result in substantial soil erosion or the loss of topsoil through the need for grading activities because increased density would result in heavier buildings that would require deeper foundations and more grading. Therefore, the 2004 Housing Element could promote increased density, which could potentially result in more soil erosion and a greater loss of topsoil compared to the 1990 Residence Element.Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density and development on undeveloped sites would be offset by compliance with State and City Building Codes that include regulations that have been adopted to reduce impacts from grading and erosion. Compliance with the Building Code is mandatory for development in San Francisco. During the design phase for all buildings, grading plans must be prepared by the engineer and architect and would be reviewed for compliance with the Building Code by the Planning Department and DBI. Regulations that would further reduce this impact include compliance with NPDES permits related to construction activities as administered by the SFBRWQCB. Under these regulations, a developer must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or more. The general permit requires the implementation of BMPs to control erosion, including the development of an erosion control and sediment control plan for wind and rain. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to substantial soil erosion or the loss of topsoil.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

As discussed under Impact GE-1, 2009 Housing Element Policies 2.1, 7.5, and 1.4 could promote development to the maximum building envelope, potentially resulting in greater building heights by directing growth to certain areas of the City and promoting increased density standards. These 2009 Housing Element policies and implementation measure could result in impacts related to erosion and the loss of topsoil by promoting housing construction on undeveloped sites.

The 2009 Housing Element also contains policies 2.3, 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3, which could reduce the 2009 Housing Element's effects on the potential for new development at maximum allowable height and bulk limits by promoting the maintenance of existing housing and discouraging demolition of the existing housing stock, thereby avoiding the potential seismic impacts that could be generated. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. 2009 Housing Element promotes development on undeveloped sites to a greater extent than the 1990 Residence Element by using stronger language and providing a list of opportunity sites, one of which is undeveloped. The preservation of existing housing reduces the pressure for new housing development that could result in increased soil erosion or loss of topsoil. Furthermore, as discussed under Impact GE-1, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. Some policies in the 2009 Housing Element could promote density near transit, increased density for affordable housing projects, and increased density through the community planning process to a greater degree than the 1990 Residence Element. Construction associated with housing could potentially result in substantial soil erosion or the loss of topsoil through the need for grading activities because increased density would result in heavier buildings that would require deeper foundations and more grading. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. When taken as a whole, the 2009 Housing Element would have less of a potential to result in density-related erosion and topsoil loss than the 2004 Housing Element. Therefore, the 2009 Housing Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in less soil erosion and a smaller loss of topsoil.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to development on undeveloped sites would be offset by the previously discussed state and local regulations. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to substantial soil erosion or the loss of topsoil.

Impact GE-3: The proposed Housing Elements would not locate housing on geologic unit or soil that is unstable, or that would become unstable as a result of the proposed Housing Elements, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant)

New construction could result in impacts related to an unstable geologic unit or soil if new housing would result in construction on or near unstable areas, including areas of artificial fill. Most of the City does not contain areas where landslide movement has previously occurred and local topographic conditions do not indicate a significant potential for permanent ground displacements due to earthquake-induced landslides. However, areas of the City with gentle to moderate slopes where projects may occur such as the Inner Sunset, Potrero District, and Hunters Point are susceptible to earthquake induced landslides or slope failures. The topography of the City varies drastically; relatively flat areas are not as susceptible to lateral spreading as those areas located on a slope. Lateral spreading may occur in sloping areas where liquefaction hazards are mapped in the event of a large earthquake. Figures V.O-1 and V.O-5 show the available housing unit capacity and pipeline units that are anticipated to be developed, or have the potential for residential development, within landslide and liquefaction hazard zones, respectively. Landslide and liquefaction hazard zones are also more susceptible to ground failure, as previously discussed.

2004 Housing Element Analysis

As discussed under Impact GE-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. (See 2004 Housing Element Policies 1.1, 1.6, 1.7, 1.8, 4.4, 4.5, 11.6, 11.7, 11.8, 11.9 and Implementation Measures 1.1.1, 1.3.1, 1.6.2, 1.8.1, 1.8.3, 4.4.1, 11.6.1 and 11.7.1.) Directing growth to certain areas of the City and increased density could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass. Construction associated with housing could potentially result in impacts related to an unstable geologic unit or soil because increased density would result in heavier buildings that could increase the likelihood of landslide, lateral spreading, subsidence, liquefaction, and collapse. Therefore, the 2004 Housing Element could promote increased density, which could potentially result in increased impacts related to unstable geologic unit or soil compared to the 1990 Residence Element. However, as discussed under Impact GE-1, 2004 Housing Element Policies 3.1, 3.3, and 3.4 would retain existing housing by promoting seismic upgrades/retrofits, maintenance of existing housing, and correction of code violations to a degree similar to the 1990 Residence Element. The preservation of existing housing reduces the pressure for new housing development that could be located on a geologic unit or soil that is unstable.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density would be offset by compliance with the previously discussed federal, state, and local regulations, including the Building Code and the San Francisco Industrial Waste Ordinance (Ordinance No. 199-77). Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the construction of housing units on project sites that could be subject to in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

As discussed under Impact WS-1, 2009 Housing Element Policies 2.1, 7.5, and 1.4 could promote development to the maximum building envelope, potentially resulting in greater building heights by directing growth to certain areas of the City and promoting increased density standards. The 2009 Housing Element also contains policies 2.3, 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3, which could reduce the 2009 Housing Element's effects on the potential for new development at maximum allowable height and bulk limits by promoting the maintenance of existing housing and discouraging demolition of the existing housing stock; thereby resulting in impacts related to an unstable geologic unit or soil because increased density would result in heavier buildings that could increase the likelihood of landslide, lateral spreading, subsidence, liquefaction, and collapse. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. When taken as a whole, the 2009 Housing Element would have less of a potential to result in impacts related to unstable geologic unit or soil than the 2004 Housing Element. Therefore, the 2009 Housing Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in fewer heavier buildings. As discussed under Impact GE-1, 2009 Housing Element Policies would retain existing housing by promoting seismic upgrades/retrofits and rehabilitation of existing housing to a degree similar to the 1990 Residence Element. The preservation of existing housing reduces the pressure for new housing development that could be located on a geologic unit or soil that is unstable.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density would be offset by compliance with the previously discussed federal, state, and local regulations. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the construction of housing units on project sites that could be subject to in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact GE-4: The proposed Housing Elements would not locate housing on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property. (Less than Significant)

New construction could result in impacts related to expansive soil if new housing would be constructed on or near unstable areas or would increase weight on soil beyond what it has previously experienced by increasing density.

2004 Housing Element Analysis

As discussed under Impact GE-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. (See 2004 Housing Element Policies 1.1, 1.6, 1.7, 1.8, 4.4, 4.5, 11.6, 11.7, 11.8, 11.9 and Implementation Measures 1.1.1, 1.3.1, 1.6.2, 1.8.1, 1.8.3, 4.4.1, 11.6.1 and 11.7.1.) Directing growth to certain areas of the City and increased density could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass.Construction associated with housing could potentially result in impacts related to expansive soil because increased density would result in heavier buildings which could increase the weight on soil beyond what it has previously experienced. Therefore, the 2004 Housing Element could promote increased density, which could potentially result in increased impacts related to expansive soil compared to the 1990 Residence Element.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density would be offset by compliance with the previously discussed federal, state, and local regulations, including the Building Code and CBC. DBI, in its permit review process, would ensure that buildings meet specifications for the protection of life and safety. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the construction of housing on project sites subject to expansive soil, creating substantial risks to life or property.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

As discussed under Impact GE-1, 2009 Housing Element Policies 2.1, 7.5, and 1.4 could promote development to the maximum building envelope, potentially resulting in greater building heights by directing growth to certain areas of the City and promoting increased density standards. Construction associated with housing could potentially result in impacts related to expansive soil because increased density would result in heavier buildings which could increase the weight on soil beyond what it has previously experienced. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. When taken as a whole, the 2009 Housing Element would have less of a potential to result in impacts related to unstable geologic unit or soil than the 2004 Housing Element. Therefore, the 2009 Housing Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in decreased impacts related to expansive soil compared to the 1990 Residence Element.

The 2009 Housing Element also contains Policies 2.3, 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3, which could reduce the 2009 Housing Element's effects on the potential for new development at maximum allowable height and bulk limits by promoting the maintenance of existing housing and discouraging demolition of the existing housing stock, thereby avoiding related to expansive soil. Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density would be offset by compliance with the previously discussed federal, state, and local regulations. DBI, in its permit review process, would ensure that buildings meet specifications for the protection of life and safety. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the construction of housing on project sites subject to expansive soil, creating substantial risks to life or property.

Impact GE-5: The proposed Housing Elements would not substantially change the topography or any unique geologic or physical features of the site. (Less than Significant)

New construction could result in impacts related to topography or unique geologic or physical features if new housing would require grading activities that have the potential to substantially change the topography or any unique geologic or physical features on project sites.

2004 Housing Element Analysis

As discussed under Impact GE-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. (See 2004 Housing Element Policies 1.1, 1.6, 1.7, 1.8, 4.4, 4.5, 11.6, 11.7, 11.8, 11.9 and Implementation Measures 1.1.1, 1.3.1, 1.6.2, 1.8.1, 1.8.3, 4.4.1, 11.6.1 and 11.7.1.) Directing growth to certain areas of the City and increased density could increase the amount of new housing occurring in those areas, thereby resulting in new development built to maximum allowable height and bulk, potentially increasing building height and mass. Increased density could result in grading activities that have the potential to substantially change the topography or any unique geologic or physical features on project sites. However, unique geologic or physical features would be determined on a site-by-site basis and is most appropriately discussed in the project-level context. Therefore, the 2004 Housing Element could promote increased density, which could potentially result in increased impacts related to topography and unique geologic features compared to the 1990 Residence Element.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to increased density would be offset because all grading and building permit applications for new construction or additions to existing buildings would be reviewed by the Planning Department to determine whether grading activities might occur with the potential to substantially change the topography of a project site. Furthermore, as part of the permitting process, construction activities for new residential units would be required to comply with the Building Code regulations related to grading and excavation activities and project design plans would be subject to review by the City's Planning Department for consistency with policies related to land alteration. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to substantial change to the topography or any unique geologic or physical features on project sites.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

As discussed under Impact GE-1, 2009 Housing Element Policies 2.1, 7.5, and 1.4 could promote development to the maximum building envelope, potentially resulting in greater building heights by directing growth to certain areas of the City and promoting increased density standards. These 2009 Housing Element policies and implementation measure could result in impacts related to erosion and the loss of topsoil by promoting housing construction on undeveloped sites.

The 2009 Housing Element also contains policies 2.3, 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3, which could reduce the 2009 Housing Element's effects on the potential for new development at maximum allowable height and bulk limits by promoting the maintenance of existing housing and discouraging demolition of the existing housing stock, thereby avoiding the potential seismic impacts that could be generated. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. The 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. Some policies in the 2009 Housing Element could promote density near transit, increased density for affordable housing projects, and increased density through the community planning process to a greater degree than the 1990 Residence Element. Decreased density could result in a reduced potential to substantially change the topography or any unique geologic or physical features on project sites due to decreased grading activities. However, unique geologic or physical features would be determined on a site-by-site basis and is most appropriately discussed in the project-level context. Nonetheless, the 2009 Housing Element, when compared to the 1990 Residence Element, does not aggressively promote density more so than the 1990 Residence Element. When taken as a whole, the 2009 Housing Element would have less of a potential to result in impacts related to topography and unique geologic features than the 2004 Housing Element. Therefore, the 2009 Housing Element would promote density to a lesser extent than the 1990 Residence Element, which could potentially result in decreased impacts related to topography and unique geologic features compared to the 1990 Residence Element.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts related to density would be offset through the Planning Department's review of all grading and building permit applications for new construction or additions to existing buildings and compliance with the Building Code regulations related to grading and excavation activities and project design plans that would be subject to review by the City's Planning Department for consistency with policies related to land alteration. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to substantial change to the topography or any unique geologic or physical features on project sites.

Cumulative Impacts

The geographic context for the analysis of impacts resulting from geologic hazards generally is site-specific, rather than cumulative in nature, because each project area has unique geologic considerations that would be subject to uniform site development and construction standards. As such, the potential for cumulative impacts to occur is limited. Impacts associated with potential geologic hazards related to soil or other conditions occur at individual building sites. These effects are site-specific, and impacts would not be compounded by additional development. Development that would occur under the 2004 and 2009 Housing Element would be sited and designed in accordance with appropriate geotechnical and seismic guidelines and recommendations consistent with the CBC. Overall, compliance with the Building Code, enforced through DBI's permit review process, would ensure that buildings meet specifications for the protection of life and safety and would reduce the effects of new construction on these hazards to a less than significant level. Therefore, the proposed Housing Elements would not result in a cumulatively considerable contribution to cumulative impacts regarding geologic hazards, and the cumulative impact of the proposed Housing Elements would be less than significant.

The 2004 Housing Element and 2009 Housing Element would not directly result in the construction of residential units, and all new development would comply with all applicable federal, state, and local regulations related to geology and soils on a project-by-project basis, which would ensure construction activities would not result in adverse impacts related to groundshaking, liquefaction, landslides, erosion, topsoil, unstable areas, expansive soil, topography, and unique geologic features. The 2004 Housing Element and 2009 Housing Element would have no impact related to the rupture of an earthquake fault and septic tanks or alternative wastewater disposal systems. The 2004 Housing Element and 2009 Housing Element policies would not directly or indirectly affect geology and soils. New development could promote increased density, which could increase effects such as landslides. However, new construction would be evaluated on a project-by-project basis for compliance with safe building regulations. In addition, the proposed Housing Elements are public policy documents and would not result in direct significant impacts. With adherence to applicable regulations governing geology and soils, the potential risks associated with geology and soils would be ***less than significant***. The contribution of potential impacts from the proposed Housing Elements to the cumulative geology and soils impacts would not be cumulatively considerable. As such, cumulative impacts would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

V. ENVIRONMENTAL SETTING AND IMPACTS
P. HYDROLOGY AND WATER QUALITY

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to water quality standards and waste discharge requirements, groundwater supplies, alteration of drainage patterns as related to erosion and flooding, the effects of runoff water on stormwater drainage systems, water quality, housing in flood hazard areas and areas susceptible to sea level rise (SLR), flood flows, levee or dam failure, and inundation by tsunami or mudflow.

ENVIRONMENTAL SETTING

San Francisco Bay

In 1993, the State Water Resources Control Board (SWRCB) initiated the Regional Monitoring Program for the San Francisco estuary for the general purposes of assessing regional water quality conditions and characterizing patterns and trends of contaminant concentrations and distribution in the water column as well as identifying general sources of contamination to the Bay. The program has established a database of water quality and sediment quality in the estuary, particularly with regard to toxic and potentially toxic trace elements and organic contaminants.

The most recent water quality data for the Central Bay,[1] where the Bayside outfalls and combined sewer overflow (CSO) structures discharge, was collected in 2003.[2] This data indicates that, with the exception of polychlorinated biphenyls (PCBs) in all samples and copper in one sample, water quality conditions remain well within water quality objectives established by the California Regional Water Quality Control Board (CRWQCB) for the parameters monitored. These parameters include conventional water quality parameters (ammonia, conductivity, dissolved oxygen, dissolved organic carbon, silicates, hardness, nitrate, nitrite, pH, phosphate, salinity, temperature, suspended solids, phaeophytin, and chlorophyll); trace elements (arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, methylmercury, nickel, selenium, silver, and zinc); and trace organics including polynuclear aromatic hydrocarbons, PCBs, pesticides, and polybrominated diphenyl ethers.

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[1] In previous years, the Regional Monitoring Program included collection of samples from specific sampling locations; the closest stations monitored were Alameda and Oyster Point. In 2002 the program adopted a stratified-random sampling design which included collection of samples from random locations within five specific hydrographic regions of the Bay. The data discussed in this section are for samples collected from four randomly selected locations with the Central Bay hydrographic region which are adjacent to the Project Area.

[2] Balboa Park Station Area Plan, Adopted April 7, 2009, at page 275. Original Source: San Francisco Estuary Institute, Annual Monitoring Results, the San Francisco Estuary Regional Monitoring Program for Trace Substances (RMP), 2003. Accessed at http://www.sfel.Org/rmp/2003/2003_AnnuatResults.htm.

Pacific Ocean

The San Francisco Public Utilities Commission (SFPUC) conducts the Southwest Ocean Outfall Regional Monitoring Program to assess the environmental effects related to the discharge of effluent from the Oceanside Water Pollution Control Plant (OWPCP) and associated CSO facilities. The program includes a Beach Monitoring Program to monitor bacterial concentrations at recreational beaches and a regional Offshore Monitoring Program involving the collection and analysis of physical, chemical, and biological parameters to assess and compare the Southwest Ocean Outfall (SWOO) outfall region to reference conditions.[3] The Offshore Monitoring Program has demonstrated that between 1997 and 2004, San Francisco beaches were available for water contact recreation 95 percent or more of the time during the eight-year monitoring period. Biological parameters and sediment pollutant concentrations at the SWOO discharge area have generally been the same or essentially the same as at reference stations.

Other Water Features

Bays and natural lakes in the City include: Mountain Lake, Mission Bay, Yerba Buena Cove, Lake Merced, Laguna Puerca, and Laguna Honda.[4] Artificial bodies of water include: Twin Peaks Reservoir and Sunset Reservoir in the southwestern quadrant of the City; University Mound Reservoir, Yosemite Marsh, McNab Lake, South Basin, India Basin, and Islais Creek Channel in the southeastern quadrant; China Basin and Mission Creek Channel in the northwestern quadrant; and Spreckels Lake, Stow Lake, and various smaller lakes and ponds in Golden Gate Park in the northwestern quadrant.[5] Between Hunters Point and Candlestick Point, an unnamed stream runs north to south and drains into the South Basin in the Bay. Historically, there were small creeks which ran from the east side of the City to the Bay, including Hayes Creek, Arroyo Delores, Mission Creek, Precita Creek, Islais Creek, and Yosemite Creek. The Presidio is home to Lobos Creek and Dragonfly Creek.

Figure V.P-1 shows watersheds of the City and illustrates whether the watershed drains to the San Francisco Bay or the Pacific Ocean. As shown, due to the hilly nature of the City many of the watershed drain to both the San Francisco Bay and the Pacific Ocean. Golden Gate Park and the area around Lake Merced do not drain to either San Francisco Bay or the Pacific Ocean and instead drain to the ground.

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[3] Balboa Park Station Area Plan, Adopted April 7, 2009, at page 275. Original Source: San Francisco Public Utilities Commission, Southwest Ocean Outfall Regional Monitoring Program, Eight-Year Summary Report, 1997-2004. January 2006.

[4] Creek and Watershed Map of San Francisco, Oakland Musuem of California, 2007, website, http://www.museumca.org/creeks/1690-OMSFVeryBig.html, accessed April 5, 2009.

[5] The list of artificial bodies of water was created by cross checking the Creek and Watershed Map of California with a map provided by the CDFG IMAPS Viewer. California Department of Fish and Game, IMAPS Viewer: Restricted BIOs Viewer, website: http://www.dfg.ca.gov/biogeodata/gis/imaps.asp, accessed April 5, 2009. The "California Lakes" and "Hydrography (100K)" layers were reviewed to prepare the list of water features in San Francisco.

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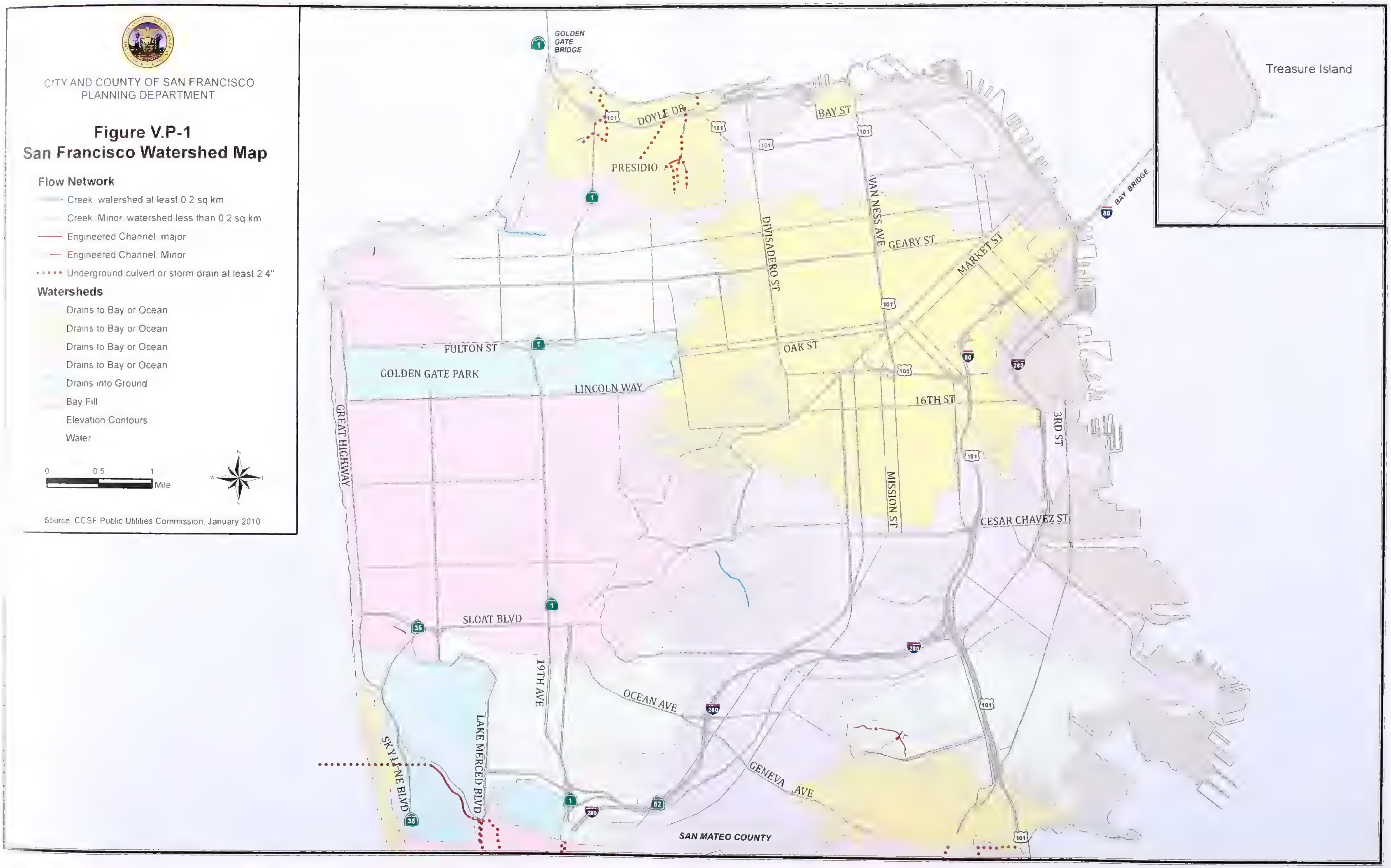
Figure V.P-1
San Francisco Watershed Map



Source: CCSF Public Utilities Commission, January 2010

Groundwater

The City overlies all or part of seven groundwater basins. These groundwater basins include the Westside, Lobos, Marina, Downtown, Islais Valley, South San Francisco, and Visitation Valley basins. The Lobos, Marina, Downtown and South basins are located wholly within the City limits, while the remaining three extend south into San Mateo County. With the exception of the Westside and Lobos basins, all of the basins are generally inadequate to supply a significant amount of groundwater for municipal supply due to low yield.[6]

Local groundwater use has continued in small quantities in the City. For several decades groundwater has been pumped from wells located in Golden Gate Park and the San Francisco Zoo. Based on well operator estimates, about 2.5 mgd is produced by these wells. The groundwater is mostly used in the Westside Groundwater Basin by the San Francisco Recreation and Park Department for irrigation in Golden Gate Park and at the Zoo. These wells are located in the North Westside Groundwater Basin. The California Department of Water Resources (CA DWR) has not identified this basin as overdrafted, nor as projected to be over drafted in the future.[7]

The Downtown San Francisco groundwater basin is located on the northeastern portion of the San Francisco peninsula, and is one of five basins in the eastern part of San Francisco, each separated from the other by bedrock ridges. The groundwater basin is made up of shallow unconsolidated alluvium underlain by less permeable bedrock within the watershed located east and northeast of the Twin Peaks area including Nob and Telegraph Hills to the north and Potrero Point to the east, as well as most of the downtown area. Bedrock outcrops along much of the ridge form the northeastern and southern basin boundaries. In general, groundwater flow is northeast, following the topography. Average precipitation within the basin is approximately 24 inches per year.[8] Groundwater from the Downtown basin is used for some industrial and landscape irrigation.

Based on semi-annual monitoring, the groundwater currently used for irrigation and other nonpotable uses in San Francisco meets, or exceeds, the water quality needs for these end uses. Plans for the development of additional groundwater in San Francisco include plans for potable supply in the North Westside Groundwater Basin. As part of this effort, the groundwater quality at new proposed well sites is being sampled for all drinking water parameters. Based on preliminary information collected to date, water quality appears to meet drinking water standards at the new proposed well sites. However, two existing irrigation wells have detected nitrate and iron at levels above drinking water standards. These elevated levels may be the result of a shallow sanitary seal or other historic land uses at these specific sites.[9]

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[6] San Francisco Public Utilities Commission (SFPUC), 2005 Urban Water Management Plan for the City and County of San Francisco, at page 15, December 2005.

[7] SFPUC, 2005 Urban Water Management Plan for the City and County of San Francisco, at page 15, December 2005.

[8] California Department of Water Resources Division of Planning and Local Assistance, California's Groundwater Bulletin 118, San Francisco Hydrologic Region Downtown Groundwater Basin, prepared February 27, 2004, accessed February 24, 2009.

Groundwater recharge to the groundwater basins occurs from infiltration of rainfall, landscape irrigation, and leakage of water and sewer pipes. Recharge to the Downtown San Francisco groundwater basin was estimated to be 5,900 acre-feet (ac-ft) per year. Recharge due to leakage from municipal water and sewer pipes accounted for about half of the total recharge of groundwater in the San Francisco area. Average recharge to the San Francisco groundwater basins beneath the project site varies from 269 to 1,836 ac-ft year.[10]

The limited available water quality data for the San Francisco basins show that the general character of groundwater for all basins beneath the entire San Francisco peninsula is similar. Groundwater beneath the San Francisco peninsula is a mixed cation bicarbonate type, and considered generally "hard" ($CaCO_3$ concentrations between 121 and 180 mg/L). Concentrations of most major dissolved constituents are within the guidelines recommended by the U.S. EPA. Total dissolved solids vary from about 200 to over 700 parts per million. Elevated concentrations of nitrate and chloride are common, especially at shallower depths.[11]

Stormwater

Refer to Section V.L (Utilities and Service Systems) for a discussion of the City's combined sewer and stormwater system.

Bacterial Concentrations

Bacterial concentrations may increase to levels above water quality standards in the vicinity of the CSOs.[12] When overflows occur, the City is required to post signs on beaches in the vicinity of the CSO until the bacteria level drops below the single sample minimum protective bacteriological standards contained in the California Department of Health Services regulations for public beaches and ocean water contact sports. Although bacterial concentrations are a concern, they do not currently result in a violation of either of the City's wastewater NPDES permits.

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[9] SFPUC, 2005 Urban Water Management Plan for the City and County of San Francisco, at page 19, December 2005.

[10] California Department of Water Resources Division of Planning and Local Assistance, California's Groundwater Bulletin 118, San Francisco Hydrologic Region, prepared February 27, 2004, website accessed February 24, 2009.

[11] California Department of Water Resources Division of Planning and Local Assistance, California's Groundwater Bulletin 118, San Francisco Hydrologic Region Marina Groundwater Basin, prepared February 27, 2004, accessed February 24, 2009.

[12] Balboa Park Station Area Plan, Adopted April 7, 2009, at page 276. Original Source: San Francisco Public Utilities Commission, Wastewater System Reliability Assessment, Baseline Summary, Draft. December 2003. Prepared by SFPUC Water Pollution Control Division, San Francisco Department of Public Works, Bureau of Engineering, Hydraulic & Mechanical Sections, and The Water Infrastructure Partners.

Water Quality

The SFPUC's Water Quality Division regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure that the SFPUC's water meets or exceeds federal and state drinking water standards. In 2007, Water Quality staff conducted 92,692 drinking water tests in the transmission and distribution systems, and treatment plant operators collected more than 77,000 water samples for treatment process control monitoring.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Such substances are called contaminants. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In 2007, SFPUC water met or exceeded federal and state standards for drinking water, as in years past.[13]

Sea Level Rise

The California Climate Change Center predicts that sea level in California would rise between 10.9 to 71.6 centimeters (cm) (0.36 to 2.3 feet) above existing mean sea level (msl) by 2099 as a result of climate change.[14] When combined with astronomical tides, even a one-foot increase in msl would result in the 100-year event high tide peak occurring at the 10-year event frequency.[15]

Flooding

The City of San Francisco does not currently participate in the National Flood Insurance Program (NFIP), and no flood maps are published for the City. The Federal Emergency Management Agency (FEMA) has issued preliminary Flood Insurance Rate Maps (FIRMs) which support the NFIP for San Francisco Bay communities. The final FIRMs are not expected until 2011; however, the City has identified its own FIRM areas, which are virtually identical to the FEMA maps, and are proposing a corresponding ordinance. Figure V.P-2 identifies the areas of the City that are within the FIRM preliminary areas subject to flooding.

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[13] SFPUC, Annual Water Quality Report, 2007.

[14] Cayan, D., P. Bromirski, K. Hayhoe, M. Tyree, M. Dettinger, and R. Flick. 2006. Projecting Future Sea Level: Table 3 Projected global sea level rise (SLR) (cm) for the SRES A1fi, A2, and B1 greenhouse gas emission scenarios. SLR for A2 and B1 scenarios is estimated by combining output recent global climate change model simulations with MAGICC projections for the ice melt component. SLR estimates for A1fi estimated from MAGICC based on A2 temperature changes scaled according to those in A1fi. A Report from the California Climate Change Center CEC-500-2005-2002-SF. Other sources, such as the Bay Conservation and Development Commission (BCDC), project a 55-inch (approximately 140 cm) sea level rise increase by the end of the century.

[15] Floyd, M., M. Anderson, M. Roos, R. Peterson, M. Perrone, and D. Todd. 2006. Chapter 2: Potential Impacts of Climate Change on California's Water Resources, Figure 2.32 Impact of One Foot Sea Level rise on the Relative Effect of Astronomical tides in the Delta. p. 2-53. In Medelin, J., J. Harou, M. Olivares, J. Lund, R. Howitt, S. Tanaka, M. Jenkins, K. Madani, and T. Zhu (Eds), Climate Warming and Water Supply Management In California: White Paper. A Report From Climate Change Center CEC-500-2005-195-SF.

Tsunamis, Seiches, and Mudflows

A study by the Federal Insurance Administration estimated the probabilities that seismic sea waves (tsunamis) would produce run-up of seawater into San Francisco. Damaging tsunamis are not common on the California coast and devastating tsunamis have not occurred in historic times in the Bay Area. However, due to the lack of information about the kind of tsunami run-ups that have occurred in the prehistoric past, there is considerable uncertainty about the extent of run-up that could occur. Therefore, research into the run-up potentials in California is ongoing.[16] The San Francisco General Plan's 20-Foot Tsunami Run-up Map displays areas of the City where tsunami run-ups/inundation is thought to be possible. The areas adjacent to the Bay in the northeastern, eastern, southeastern, and western portions of the City are displayed as areas of potential inundation by tsunamis.

A seiche is an oscillation of a body of water. Seiches occur most frequently in enclosed or semi-enclosed basins, such as lakes, bays, or harbors, and may be triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides. Triggering forces that set off a seiche are most effective if they operate at specific frequencies relative to the size of an enclosed basin. Coastal measurements of sea level often show seiches with amplitudes of a few centimeters and periods of a few minutes, caused by oscillations of the local harbor, estuary, or bay, superimposed on the normal tidal changes. Tidal records for San Francisco Bay have been maintained for over 100 years, and during this period, a damaging seiche has not occurred. A seiche of approximately four inches occurred during the 1906 earthquake, an event of magnitude 8.3 on the Richter scale. It is probable an earthquake similar to the 1906 event would be the largest experienced in the Bay Area; consequently a seiche larger than four inches is considered unlikely to occur.[17]

Mudflows, or mudslides, may occur in San Francisco during periods of heavy rain.[18] A mudflow is a type of landslide that occurs when runoff saturates the ground. Soil that is dry during dry weather turns into a viscous solution that slides downhill. Mudflows typically cause more damage than clear-water flooding because debris-filled water moves with greater force. Refer to Section V.O (Geology and Soils) for a discussion of the potential of impacts from landslides.

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[16] City and County of San Francisco, Planning Department, San Francisco General Plan, Community Safety Element, Adopted August 15, 1997.

[17] City and County of San Francisco, Planning Department, Candlestick Point–Hunters Point Shipyard Phase II Development Plan EIR, November 2009. Original Source: Working Group On California Earthquake Probabilities, Earthquake Probabilities in the San Francisco Bay Region: 2002–2031, United States Geological Survey Open-File Report 03-214, Appendix D. —Magnitude and Area Data for Strike Slip Earthquakes, Dr. William L. Ellsworth, Research Seismologist, USGS, 2003.

[18] City and County of San Francisco, Planning Department, San Francisco General Plan, Community Safety Element, Adopted August 15, 1997.

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Figure V.P-2
Potential Housing Units: Capacity and Pipeline Units within the Preliminary Flood Insurance Rate Map Areas

▨ Federal Emergency Management Agency Preliminary Areas Subject to Flooding

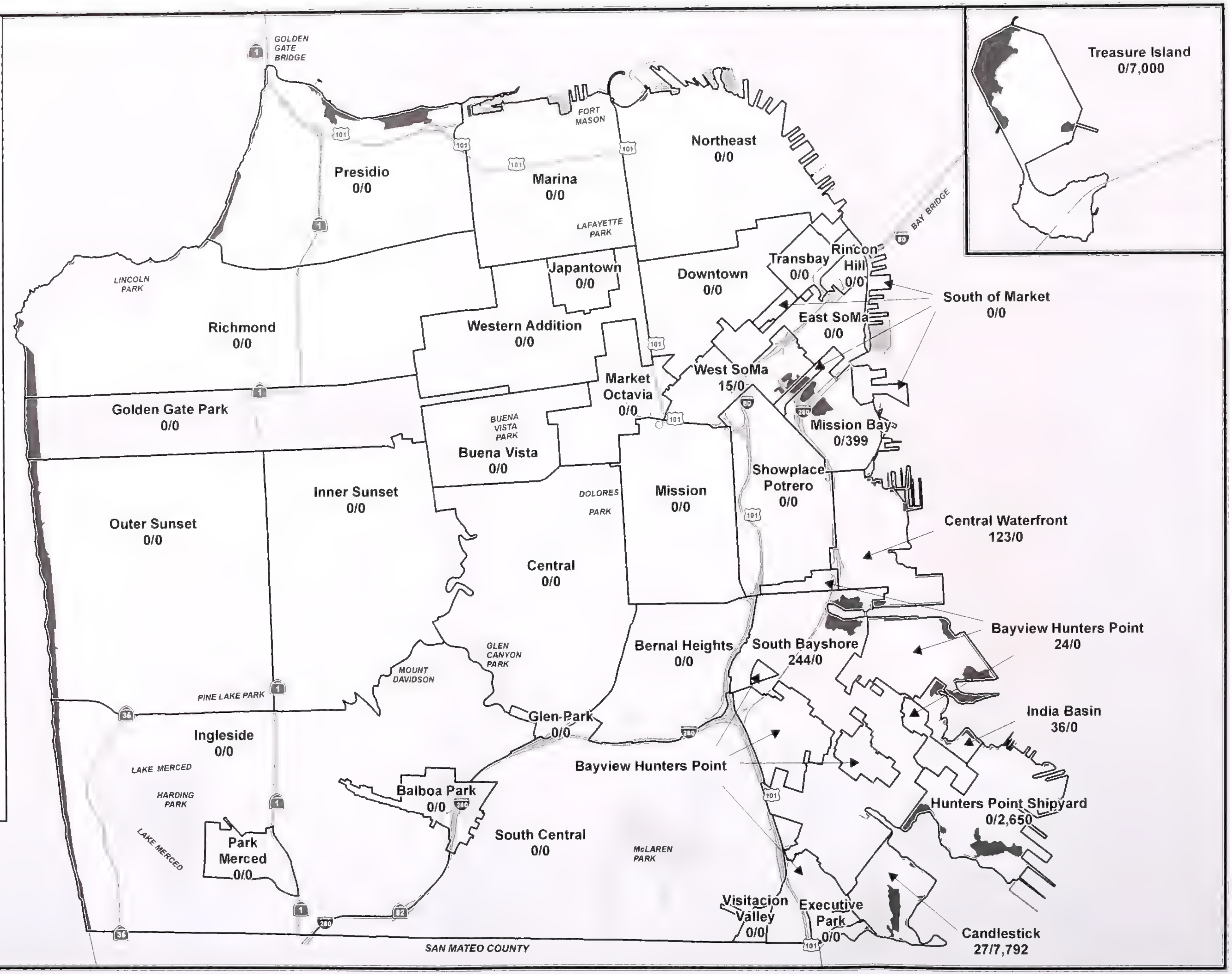
Parks

Water

Notes

Numerical values represent housing capacity within the Federal Emergency Management Agency (FEMA) preliminary flood areas followed by net pipeline units within these areas (Housing Unit Capacity/ Pipeline Units), except as noted below

Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated



Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Preliminary Flood Insurance Rate Map Areas Federal Emergency Management Agency September 2007

Dam Failure

Dams and reservoirs which hold large volumes of water represent a potential hazard due to failure caused by ground shaking. The San Francisco Water Department owns above-ground reservoirs and tanks within San Francisco. The San Francisco Water Department monitors its facilities and submits periodic reports to the California Department of Water Resources, Division of Safety of Dams (DOSD), which regulates large dams.[19]

The SFPUC has nearly completed a seismic retrofit of the City's largest reservoir, the Sunset Reservoir. This reservoir provides 60 percent of the water delivered to homes and businesses in San Francisco, and will also be able to deliver water to the San Francisco Peninsula in an emergency. The north basin roof, columns and beams at the Sunset Reservoir have been seismically reinforced. Earlier in the project, the earth embankment around the reservoir was stabilized. The DOSD mandated that SFPUC undertake this work to minimize potential for movement during an earthquake.[20]

REGULATORY SETTING

Federal/State

Section 402 of the Clean Water Act

Section 402 of the federal Clean Water Act (CWA) authorizes the U.S. Environmental Protection Agency (EPA) to regulate water quality in California by controlling the discharge of pollutants to water bodies from point sources (a municipal or industrial discharge at a specific location or pipe) and non-point sources (diffuse runoff of water from adjacent land uses) through the National Pollution Discharge Elimination System (NPDES).

Within the City limits, NPDES permits are administered by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), a division of the California State Water Resources Control Board (SWRCB). Federal regulations issued in November 1990 and revised in 2003 expanded the authority of the SWRCB to include permitting of stormwater discharges from municipal storm sewer systems, industrial processes, and construction sites that disturb areas larger than one acre.

The 1990 amendments included Phase I of the NPDES stormwater program, which addresses stormwater discharges from municipal separate storm sewer systems serving populations over 100,000 and industrial activities, including discharges from construction activities disturbing five acres or more. San Francisco was not subject to the Phase I requirements because it is a combined sewer system, although certain areas within the Port of San Francisco were subject to and complied with permit requirements for industrial sites.

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[19] Id.

[20] SFPUC, website, accessed February 24, 2009.

In 1999, NPDES Phase II regulations were issued, requiring stormwater discharge permits for municipalities not covered under Phase I as well as for construction activities disturbing over one acre. These Phase II stormwater regulations became effective in March 2003. In accordance with the Phase II stormwater regulations, those portions of San Francisco that are not served by the combined sewer system are subject to the requirements of the statewide General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems.

The SWRCB has adopted a single, state-wide General Permit for application to all stormwater discharges associated with construction activities that disturb more than one acre. This General Permit requires all potential dischargers (or, alternatively, "project sponsors") to:

- Prepare and implement a stormwater pollution prevention plan that identifies the best management practices (BMPs) that will be employed to prevent all construction pollutants from contacting stormwater and to prevent all erosion-generated sediment from being discharged into off-site surface waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; and
- Inspect and properly maintain all BMPs.

The General Permit is implemented and enforced by the nine California RWQCBs, and by the cities and counties to whom the NPDES regulations also apply. Large cities or other municipalities must obtain a stormwater permit for discharges of urban runoff from municipal storm drain systems.

Under the auspices of this Act, the U.S. Army Corps of Engineers (ACE) administers permitting programs that authorize impacts to "waters of the United States" including "wetlands" and "other waters." Such impacts may not be permitted until the SWRCB, acting through its regional boards, certifies that activities covered by the permit will not violate water quality standards. Certification must be consistent with the requirements of CWA, CEQA and California Endangered Species Act, and with the SWRCB's mandate to protect beneficial uses of waters of the state.

Clean Water Act Section 404 & 401

The ACE and the EPA regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the CWA (33 U.S.C. 1344). Waters of the United States are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33 CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under Section 404 include fill for development, water resource projects (such as dams and levees), infrastructure developments (such as highways and airports) and mining projects. Section 404 of the CWA requires a federal license or permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the SWRCB and its nine RWQCBs.

Federal Emergency Management Agency

FEMA identifies flood zones (i.e., areas that are subject to flooding) through FIRMs. The standard for flood protection established by FEMA, and used by the State CEQA Guidelines, is the 1-in-100 annual exceedance probability, commonly referred to as the "100-year flood event" (i.e., the flood that has a 1 percent chance of occurring in any given year). Levees that provide flood protection are required by FEMA to have 3 feet of freeboard above the 100-year flood event.

The Porter-Cologne Water Quality Control Act

Article 4 Waste Discharge Requirements of the Porter-Cologne Act (Section 13260) requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system, shall file with the appropriate regional board a report of the discharge, containing the information which may be required by the regional board. The RWQCB determines if a project should be regulated pursuant to this act based on the likelihood that it would pose any "threat" to water quality. Placement of clean-fill in waters of the state is considered pollution because it can potentially alter existing water quality, which may adversely affect its beneficial uses.

Groundwater Wells

Section 13801 of the California Water Code requires the SWRCB to adopt a model ordinance, and each county, city, or water agency to adopt ordinances, for well placement, construction, and abandonment that meet or exceed California Department of Water Resources (DWR) standards.[21] Standards for wells in

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[21] State of California, Department of Water Resources, Division of Planning and Local Assistance, California Laws for Water Wells, Monitoring Wells, Cathodic Protection Wells, Geothermal Heat Exchange Wells, March 2003.

California are found in DWR Bulletins No. 74-81 and 74-90, entitled Water Well Standards, State of California.

California Water Plan

The California Water Plan provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The Plan, which is updated every five years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the State's water needs.

Federal Combined Sewer Overflow Control Policy

On April 11, 1994, the EPA adopted the Combined Sewer Overflow Control Policy, which became part of the Clean Water Act in December 2000. This policy establishes a consistent national approach for controlling discharges from combined sewers. Using the NPDES permit program, the policy initiates a two-phased process with higher priority given to more environmentally sensitive areas. During the first phase, the permitee is required to implement the controls that constitute the technology-based requirements of the Clean Water Act and can reduce the frequency of CSOs and their effects on receiving water quality.

The City is currently implementing these controls as required by the CSO control policy. This includes development of a Water Pollution Prevention Program which focuses on minimizing pollutants from entering the City's combined sewer system and addressed pollutants from residential, commercial, industrial, and nonpoint pollutant sources.

Regional/Local

Water Quality Control Plan for the San Francisco Bay Basin

The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) regulates water quality in San Francisco Bay under the Porter-Cologne Water Quality Control Act through regulatory standards and objectives in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan identifies existing and potential beneficial uses and provides numerical and narrative water quality objectives to protect those uses. The Basin Plan identifies the following existing beneficial uses for the San Francisco Bay: ocean, commercial and sport fishing; estuarine habitat; industrial service apply; fish migration; navigation; preservation of rare and endangered species; water contact recreation; non-contact water recreation; shellfish harvesting; and wildlife habitat. Pollutants that have been identified as causing impairments in San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, furan compounds, mercury, exotic species, and PCBs. The law requires the development of total maximum daily loads (TMDLs) to identify the maximum concentration of particular pollutants that will impair water quality and to identify pollution prevention, control, or restoration strategies. The SFBRWQCB has developed TMDL reports for pollutants including PCBs and mercury, and has proposed Basin Plan amendments regarding TMDL.

Urban Water Management Plan

In accordance with the California Water Code 10610, also known as the Urban Water Management Planning Act (Act) of 1984, the City adopted an Urban Water Management Plan (UWMP) in 2006. The Act states that the UWMP must be updated every five years to identify short-term and long-term water demand management in order to meet growing water demands during normal, dry and multiple dry years. The UWMP provides information about the City's responsibilities towards water supply and water recycling in the community including wastewater generation, collection, treatment, and disposal.

Recycled Water Master Plan

The SFPUC has developed the 2006 Recycled Water Master Plan to provide guidance for implementing recycled water projects in San Francisco. The Plan includes a citywide assessment of potential recycled water users. Recycled water use in the northeast and east side of San Francisco is being evaluated as part of the Sewer System Master Plan. The purpose of the Plan is to identify where and how San Francisco could most feasibly develop recycled water in the City and to provide a strategy for implementing the recycled water projects identified.

Sewer System Master Plan

San Francisco's combined sewer system is overseen by a comprehensive master plan adopted approximately 40 years ago. The sewer system has operated well but aging infrastructure, funding constraints, and deferred maintenance have created the need for another long-term master plan. In 2005, the SFPUC initiated a new master plan to develop a long-term strategy for management of the City's wastewater and stormwater, to provide a detailed roadmap for improvements needed over the next few decades and to estimate funds to implement these improvements, to address specific challenges facing the system, and to maximize system reliability and flexibility. Environmental review of the draft Master Plan is anticipated to be complete in 2011.[22]

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to hydrology and water quality are discussed in Section V.A (Plans and Policies) of this Draft EIR.

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[22] SFPUC, Wastewater (Sewers): Sewer System Master Plan, website: http://sfwater.org/mto_main.cfm/MC_ID/14/MSC_ID/120/MTO_ID/677, accessed April 2, 2009.

San Francisco Public Works Code

Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program regulate the discharge of pollutants into the sewer system. The General Manager is authorized with various charges including to conduct an industrial waste pretreatment program, to issue permits containing discharge requirements, to require the construction and use of pretreatment systems or devices to treat wastewater prior to discharge to the sewer system, and to distribute wastewater discharges over a period of time. The General Manager may require any discharger to develop a compliance schedule containing dates for the commencement and completion of major events leading to the construction and operation of pretreatment systems or devices necessary for compliance with the provisions of this Article in the shortest time possible. No compliance schedule shall allow more than nine months between any two major event dates. Any grab sample of the discharger's wastewater shall not at any time exceed any of the following numerical limitations shown in Table V.P-1.

Table V.P-1
Wastewater Pollutant Limitations

Pollutant Parameter	Limits
pH	6.0 min; 9.5 max
Dissolved sulfides	0.5 mg/l
Temperature (except where higher temperatures are required by law)	125° (52° C)
Hydrocarbon oil and grease	100 mg/l
Total recoverable oil and grease (in wastewater discharge generated over a production week)	300 mg/l

Source: San Francisco Public Works Code, Article 4.1, as amended by Ord. 116-97 and approved March 28, 1997.

Representative composite total recoverable oil and grease samples shall be composited by grab sampling, as required in federal regulations at 40 CFR Part 403 (1990), which are incorporated by reference in this Article.

Water Quality Protection Plan

San Francisco Mayor Gavin Newsom directed the SFPUC to produce a detailed and specific Water Quality Protection Plan. The Plan contains the following recommendations:

- Protect and retain Hetch Hetchy Reservoir as SFPUC's primary source water.
- Continue watershed protection efforts at local reservoirs as outlined in the watershed management plans.
- Continue to evaluate advanced treatment options to bring alternative supply sources to Hetch Hetchy quality.

- Continue to monitor technology developments.
- Conduct a formal distribution system operations assessment.
- Clarify and revise the monitoring framework for emerging contaminants.
- Evaluate and utilize appropriate on-line water quality monitoring instruments.
- Improve the depth and frequency of interaction, consultation and engagement with customers.
- Explore opportunities to extend SFPUC engagement beyond the meter.
- Develop a comprehensive, analytical integrated risk management framework for guiding the allocation of resources.
- Integrate fundamental objectives for water quality protection across various SFPUC divisions and task the Water Quality Director to review capital and operational decisions.

Stormwater Management Plan

The San Francisco Stormwater Management Plan has been developed, and will be implemented, to ensure that San Francisco is in compliance with Phase II requirements of Section 402 of the Clean Water Act described above under federal/state regulations, which municipalities must comply with in order for stormwater discharges to be covered under the State's General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems WQO No. 2003-0005-DWQ. The RWQCB approved the City and County of San Francisco Stormwater Management Plan in 2004.

The Plan is designed to reduce the discharge of pollutants from the SFPUC's municipal separate storm sewer system (MS4) to the maximum extent practicable (MEP) and to protect water quality. MEP is the technology-based standard established by Congress in section 402(p)(3)(B)(iii) of the Clean Water Act that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally a result of emphasizing pollution prevention and best management practices such as source reduction or avoidance as the first line of defense and treatment methods as an additional line of defense, if necessary and applicable.

City of San Francisco Construction Site Water Pollution Prevention Program

The City of San Francisco Construction Site Water Pollution Prevention Program requires stormwater quality BMPs at all construction sites, regardless of the area of the site and whether the site drains to the combined or separate sewer system. Pollution prevention measures that must be implemented at all construction sites include:

- Develop SWPPP.

- Identify all storm drains and catch basins near the construction site and ensure all workers are aware of their locations to prevent pollutants from entering them.
- Protect all storm drain and catch basin inlets.
- Develop spill response and containment procedures.
- Inspect site regularly to ensure that BMPs are intact.
- Conduct daily site cleanings as needed.
- Educate employees and subcontractors about BMPs.
- Regularly maintain all BMPs at a project site.

For sites that disturb one or more acres and drain to the separate sewer system, compliance with the Construction General Permit and preparation and implementation of a SWPPP that meets Construction General Permit conditions is required. For sites that discharge to the combined sewer system, a SWPPP that includes an Erosion and Sediment Control Plan and meets SFPUC requirements must be submitted.

San Francisco Green Building Ordinance (SFGBO)

In 2008, the City adopted Chapter 13C (Green Building Requirements) into San Francisco Building Code. The purpose of the requirements is to promote the health, safety, and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the buildings within the City and by providing a healthy indoor environment. Upon full implementation of the SFGBO in 2012, residential development will be required to achieve the following minimum standards:

1. Small residential (four or fewer units) – 75 GreenPoints;
2. Mid-sized residential (five or more units less than 75 feet in height) – 75 GreenPoints; or
3. High-rise large residential – 75 GreenPoints or LEED® Silver.

The ordinance requires compliance with the applicable LEED® performance standards or GreenPoint Rated checklists (which applies mostly to residential buildings) for New Construction, Version 2.2, criteria for stormwater management, as well as the BMPs and Stormwater Design Guidelines of the SFPUC (1304C.0.3). Additionally, for high-rise residential buildings (1304C.1.3), new group B (Business) and M (Mercantile) occupancy buildings (1304C.2), and new large commercial buildings (1304C.2.2), water efficient landscaping (LEED® WE1.1) and water conservation are required (LEED® WE3.2).

LEED® SS6.2 addresses stormwater management and has been adopted by the San Francisco Stormwater Design Guidelines for MS4s.[23] The stormwater management program seeks to reduce impervious cover, promote infiltration, and capture and treat 90 percent of the runoff from an average annual rainfall event (for semi-arid watersheds; in San Francisco, treatment of 90 percent is interpreted as treating runoff produced by a rain event generating 0.75 inches) using acceptable BMPs. In addition, BMPs used to treat runoff must be capable of removing 80 percent of the average annual post development total suspended solid load contained in stormwater runoff. The BMPs are considered to meet these criteria if (1) they are designed in accordance with standards and specifications from a state or local program that has adopted these performance standards, or (2) there are filed performance monitoring data that demonstrate compliance with the criteria. LEED® WE1.1 addresses water efficient landscaping. New construction that is required to comply with this credit must submit documentation verifying a minimum of 50 percent reduction in use of potable water for landscaping (compared to the mid-summer baseline case). LEED® WE3.2 addresses water use reduction. Permit applicants must submit documentation demonstrating achievement of a minimum 20 percent reduction in the use of potable water. Effective January 1, 2011, the required reduction in use of water is 30 percent (compared to the water use baseline calculated for the building [not including irrigation] after meeting the US EPA Energy Policy Act of 1992 requirements).

Industrial Waste Ordinance (Ordinance No. 199-77)

The San Francisco Industrial Waste Ordinance requires that groundwater meet specified water quality standards before it may be discharged into the sewer system. The Bureau of Systems Planning, Environmental and Compliance of the San Francisco Public Utilities Commission must be notified of projects necessitating dewatering, and may require water analysis before discharge. Should dewatering be necessary, the final soils report would address the potential settlement and subsistence impacts of this dewatering.

New Development and Redevelopment Guidelines

Impervious surfaces such as buildings, roads, and parking lots cover much of San Francisco, blocking infiltration of rainwater, contributing to the number and volume of CSO discharges from the combined sewer system, and contributing pollutants to stormwater runoff to the combined sewer. The SFPUC is actively pursuing ways to improve its wastewater treatment efficiency and drainage performance to enhance environmental quality, reduce pollutants to the Bay and Ocean, and reduce impacts in San Francisco neighborhoods. As part of this effort, the SFPUC is developing a policy that would require new and redevelopment projects in San Francisco to incorporate green stormwater management technologies (often called Best Management Practices or Low Impact Development approaches) to maximize infiltration and minimize pollutant loads in stormwater runoff.[24] Examples of the kinds of green stormwater management that can be implemented include swales and other infiltration methods, rainwater gardens, stormwater planters, green roofs, pervious concrete, green streets, new open space, and reducing the use of pipes, curbs, and gutters. For example, the SFPUC has implemented a rain barrel program to encourage rain harvesting, which is the practice of collecting and using rainwater from hard surfaces such as roofs, to augment water supply. Implementation of these techniques helps reduce peak volumes of runoff entering the combined sewer system, reduces combined sewer discharge volumes, removes pollutants close to their source, uses rainwater as a resource, increases vegetation in the City, and provides educational opportunities.

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[23] An MS4 is a conveyance or system of conveyances that is owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); not a combined sewer; and not part of a Publicly Owned Treatment Works (sewage treatment plant).

Specific components of the program under development include the following:

- Watershed planning that considers land uses, as well as soil and hydrologic conditions, in each watershed to determine the best approach to implementing low-impact development throughout the City.

- Developing urban design standards including the Streetscape Master Plan which updates the standard designs for the City's right-of-ways to increase pedestrian safety, enhance urban forestry and other plantings, and address methods for reducing stormwater runoff from streets and sidewalks.

- Reviewing projects that can create incremental and cumulative increases in stormwater and sanitary flows and can affect San Francisco's wet weather capacity and permit compliance for the wastewater treatment plants. This review by SFPUC would ensure that large new and redevelopment projects reduce or mitigate their impacts on the wastewater system.

- Incorporating low-impact development techniques, where appropriate, in capital projects constructed under the five-year Capital Improvement Program and Wastewater Master Plan.

- Providing technical assistance to public and private developers so that low impact development techniques are properly and safely implemented, including development of design guidelines for sizing and locating stormwater BMPs.

- Constructing demonstration projects, such as the Sunset Circle Parking Lot at Lake Merced. This allows the SFPUC to monitor and document the effectiveness of different low-impact development techniques.

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[24] Balboa Park Station Area Plan, Adopted by the Board of Supervisors April 7, 2009 and signed by the Mayor April 17, 2009, at page 282. Original Source: SFPUC, Low Impact Design, website: http://sfwater.org/mto_main.cfm/MC_ID/14/MSC_ID/361/MTO_ID/541, accessed April 5, 2009.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the Regional Housing Needs Assessment (RHNA) as determined by the Association of Bay Area Governments (ABAG). Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. The 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

Impact HY-1: The proposed Housing Elements would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade water quality. (Less than Significant)

New construction could result in impacts related to the degradation of water quality if the construction of new housing would result in the discharge of sediment-laden runoff from grading activities, release of contaminated groundwater from temporary construction dewatering activities, accidental release of construction materials or chemicals into stormwater runoff that would enter the combined sewer system or enter directly into receiving waters within or adjacent to the construction sites, or result in the exposure of surface water or groundwater to contaminated soils or materials. Construction activities could include demolition of existing buildings, clearing and grading of development areas (including excavation, trenching, movement of soil, and the importation of fill soils), and the use of fuels, solvents, and chemicals. Additionally, construction activities could expose soils to rainfall and runoff, construction vehicle traffic, and wind, which could result in the erosion of soils and deposition of soils into waterways. Historic land uses at individual project sites may have resulted in the contamination of soil or groundwater by hazardous materials. Construction activities could also disturb contaminated soils on project construction sites, thereby increasing their exposure to surface water runoff and cause or contribute to surface water or groundwater quality degradation.

Wastewater includes water that is washed down drains and toilets in homes and businesses, as well as stormwater. Stormwater in the City is almost entirely diverted to the City's combined sewer and stormwater system, where it is treated along with wastewater. Construction of new housing units or increases in the number of plumbing fixtures within existing units could result in an increase in wastewater that would need to be treated. This need for treatment of additional wastewater could, on occasion, result in exceedance of capacity at the wastewater treatment plant, potentially resulting in the release of untreated wastewater. Additionally, construction of new housing could create new impervious surfaces that could result in an increase in polluted runoff from project sites, including rooftops and associated parking that would require treatment. However, this issue was evaluated in Section V.M, Public Services, of this Draft EIR, and the project was determined to result in less than significant wastewater impacts.

2004 Housing Element Analysis

The following 2004 Housing Element policies could encourage the development of new or additional housing units, the construction of which could result in violation of water quality standards or waste discharge requirements.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 2004 Housing Element also encourages new housing through on-going and future community planning processes (Policies 1.1, 11.6 and Implementation Measures 1.3.1, 1.3.2, 1.6.2, and 2.4.2) and on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4). The 1990 Residence Element similarly directs growth to commercial and industrial areas, neighborhood commercial districts, the Downtown and on infill development sites, although to a lesser degree than the 2004 Housing Element. The 2004 Housing Element also advocates for housing in community plan areas and along transit corridors, both of which are policies that were not included in the 1990 Residence Element. Policies that direct growth to certain areas of the City could increase the amount of new housing occurring in those areas, and could potentially result in violation of water quality standards or waste discharge requirements.

The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk limits, and could potentially result in violation of water quality standards or waste discharge requirements. Therefore, the 2004 Housing Element could promote increased housing construction with associated construction activities or increases in new impervious surfaces (rooftops, parking areas), increasing the demand for wastewater treatment, and therefore, an increase in polluted runoff.

While, the 2004 Housing Element encourages projects to be developed to their maximum height and bulk allowances and, in certain areas, encourages greater height limits, a key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. The following 2004 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock, thereby reducing the amount of new housing required to meet the City's housing needs and subsequent impacts to water quality resulting from new development at maximum allowable height and bulk limits, thereby potentially increasing building height and mass.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	Policy 5.5: Preserve landmark historic residential buildings.
	Implementation Measure 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	

As shown above, the 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.1, 3.3, and 3.6) to a degree similar to the 1990 Residence Element, which could reduce the amount of new housing required to meet the City's housing needs. The preservation of existing housing and even mergers within the same building envelope would serve to reduce the pressure or need to construct new housing units.

Additionally, all construction activities that could result in new development would be required to comply with the previously discussed federal, state, and local regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, Water Quality Protection Program, the City's Stormwater Management Plan, the City's Construction Site Runoff Pollution Prevention Program requirements that are described in the City's Construction Site Water Pollution Prevention Program, and forthcoming SFPUC development and redevelopment guidelines. The SFPUC's Recycled Water Master Plan would provide guidance for implementing recycled water projects, which would reduce the need for any additional wastewater treatment. Additional regulations that would reduce potential impacts from polluted runoff include compliance with NPDES permits related to construction activities as administered by the SFBRWQCB and Article 4 of the Porter-Cologne Water Quality Act, compliance with the Combined Sewer Overflow Control Policy and TMDL standards as set forth by the Basin Plan.

Overall, 2004 Housing Element would encourage the preservation and rehabilitation of existing housing. Preservation of existing housing would reduce demolition and construction activities, including those that could expose contaminated soils or materials and the use of fuels, solvents, and chemicals for construction. Therefore, construction activities that would expose soils to rainfall and runoff (clearing and grading activities), or spread exposed soils (construction vehicle traffic and wind), would be reduced as well. While there could be construction of auxiliary units on undeveloped project sites, these policies would discourage wholesale razing and reconstruction, thereby resulting in minimal increases in demand for wastewater treatment on sites where existing housing is maintained through retrofitting. Furthermore, the 2004 Housing Element promotes density to a greater extent than the 1990 Residence. This increase in density could be accomplished by mergers of units to create larger family-sized units. Mergers would be internal to the building envelope and would not require grading or the creation of new impervious surfaces; therefore the creation of new impervious surfaces would be minimal.

Lastly, regulations incorporated into the SFGBO address stormwater management by seeking to reduce impervious cover, promote infiltration, and capture and treat 90 percent of the runoff from an average annual rainfall event using acceptable BMPs. These regulations require that projects on undeveloped sites would need to avoid any increase in runoff, while previously developed sites would be required to reduce runoff from existing amounts. While the 2004 Housing Element does promote new construction of housing units to meet projected housing demand, the 2004 Housing Element does not contain any policies that would directly or indirectly result in violations to water quality standards, waste discharge requirements, or otherwise degrade water quality. New construction could affect such issues, but would be subject to the previously discussed federal, state, and local regulations. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to violation of any water quality standards or waste discharge requirements.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

The following 2009 Housing Element policies could result in increases to density, which could result in violation of water quality standards or waste discharge requirements.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunter's Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure (Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80), thereby directing housing to commercial areas. As discussed previously, directing new housing to certain areas of the City could increase the amount of new housing occurring in those areas, thereby potentially resulting in new development. Accordingly, there is a potential to create new impervious surfaces resulting in an increase in polluted runoff from project sites, including rooftops and associated parking that would require treatment.

The 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). While the 2009 Housing Element contains a policy that advocates for family-sized housing units (Policy 4.1 and Implementation Measure 32), overall density increases from such policy would be speculative as less units would be accommodated within a given building envelope. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing built to maximum allowable height and bulk, thereby potentially resulting in new development. Accordingly, there is a potential to create new impervious surfaces resulting in an increase in polluted runoff from project sites, including rooftops and associated parking that would require treatment. However, as previously discussed, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element and would therefore have a greater potential to create impervious surfaces Citywide.

Similar to the 2004 Housing Element, major themes of the 2009 Housing Element include the preservation and maintenance of existing housing. The following 2009 Housing Element policies discourage demolition and encourage the maintenance of the City's existing housing stock and promote green development, thereby reducing the amount of new housing required to meet the City's housing needs and could further reduce the 2009 Housing Element's effects on the potential for new impervious surfaces resulting in an increase in polluted runoff from project sites.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Discourage demolition and improve existing housing supply	Policy 2.3: Prevent the destruction or reduction of housing for parking.	
	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.
Promote green housing development	Policy 13.4: Promote the highest feasible level of "green" development in both private and municipally-supported housing.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3) to a degree similar to the 1990 Residence Element. The maintenance and preservation of existing housing would help to preserve the existing housing stock, requiring less new development to meet housing goals, thereby resulting in less development at maximum allowable height and bulk limits. 2009 Housing Element Policy 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3 are essentially the same as their corresponding 1990 Residence Element policies. 2009 Housing Element Policy 13.4 expands upon 1990 Residence Element Policy 7.5 by promoting the preservation of existing buildings. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

As shown above, the 2009 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3) to a degree similar to the 1990 Residence Element. The maintenance and preservation of existing housing would help to preserve the existing housing stock, requiring less new development to meet housing goals, thereby resulting in less development at maximum allowable height and bulk limits. 2009 Housing Element Policy 2.4, 3.1, 3.2, 3.4, 3.5 and 9.3 are essentially the same as their corresponding 1990 Residence Element policies. Furthermore, the 2009 Housing Element contains policies (including Policy 13.4) advocating for green development, which could reduce the effects of new construction on water quality standards and discharge requirements. Essentially, both the 1990 Residence Element and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

2009 Housing Element Policy 2.3 discourages the modification of existing habitable space in favor of parking, which would reduce the potential for construction of large areas of impervious surfaces that could contribute polluted runoff to City drainages or requiring treatment at the wastewater treatment plant. Implementation Measure 102 supports the continued implementation of the SFGBO and other incentive programs that support green upgrades. These programs, which reduce the environmental impacts of development, would continue irrespective of the 2009 Housing Element. Although the 2009 Housing Element contains policies that promote new construction, which could result in impacts related to water quality standards, waste discharge requirements, or otherwise degrade water quality, the 2009 Housing Element would not by itself result in the construction of residential units and all new development would be required to comply with the previously discussed regulations. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to violation of any water quality standards or waste discharge requirements.

Impact HY-2: The proposed Housing Elements would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

New construction could result in impacts related to groundwater supplies if new housing would require dewatering or result in groundwater drawdown. The City overlies all or part of seven groundwater basins. With the exception of the Westside and Lobos basins, all of the basins are generally inadequate to supply a significant amount of groundwater for municipal supply due to low yield. However, plans are underway for the development of additional groundwater supplies in San Francisco for potable supply in the North Westside Groundwater Basin that could reduce groundwater supplies.[25] The North Westside Groundwater Basin underlies that portion of the Sunset District in San Francisco from Golden Gate Park to the San Francisco/San Mateo County line, and from the Pacific Ocean to inland bedrock exposures generally associated with Mount Sutro and Mount Davidson. An increase in housing units could increase demand for water supply that could result in groundwater drawdown of the North Westside Groundwater Basin. Additionally, groundwater could be depleted through dewatering during construction activities or an increase in impervious surfaces that could inhibit groundwater recharge.

2004 Housing Element Analysis

As discussed under Impact HY-1, the 2004 Housing Element promotes policies to encourage new residential development. Increased density and directing growth to certain areas of the City (including vacant or underutilized parcels) and increased density could increase the amount of new housing construction occurring in those areas. Construction of new housing could potentially result in the need for dewatering during construction or increase the amount of impervious surface interfering with groundwater recharge.

Although short-term construction groundwater dewatering may be necessary at certain locations (e.g., for installation of building foundations or underground utilities), dewatering would have only a minor temporary effect on the groundwater table elevation in the immediate vicinity of the activity, and would not measurably affect groundwater supplies. Additionally, preservation of existing housing could reduce construction activities and the need for new housing units that could increase impervious surfaces.

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[25] SFPUC, 2005 Urban Water Management Plan for the City and County of San Francisco, at page 19, December 2005.

Local groundwater use has continued in small quantities in the City. For several decades groundwater has been pumped from wells located in Golden Gate Park and the San Francisco Zoo. Groundwater from the Downtown basin is used for some industrial and landscape irrigation. Plans for development of additional groundwater in San Francisco include plans for potable supply in the North Westside Groundwater Basin. Although some 2004 Housing Element policies could potentially increase impervious surfaces that would reduce infiltration and recharge, the 2004 Housing Element, in itself, would not result in the construction of residential units. In addition, the 2004 Housing Element does not contain any policies that would directly affect groundwater resources. New construction could affect such issues, but would be evaluated on a project-level basis considering location of development, depth to groundwater, and type of construction being proposed. New development could affect such issues, but would be required to comply with the previously discussed regulations. These regulations include compliance with the SFGBO requirements for stormwater infiltration and on-site treatment, which is adopted as part of San Francisco Stormwater Design Guideline for MS4s and seeks to reduce impervious cover that would interfere with groundwater recharge. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to substantially depleting groundwater supplies or interfering substantially with groundwater recharge.

2009 Housing Element Analysis

As discussed under Impact HY-1, the 2009 Housing Element promotes policies to encourage new residential development. Increased density and directing growth to certain areas of the City (including vacant or underutilized parcels) and increased density could increase the amount of new housing construction occurring in those areas. Construction of new housing could potentially result in the need for dewatering during construction or increase the amount of impervious surface interfering with groundwater recharge.

However, as discussed under Impact HY-1, 2009 Housing Element Policies 2.5, 12.3, and 13.4 and Implementation Measure 102 could reduce the 2009 Housing Element's effects on the potential for depletion of groundwater supplies or interference with groundwater recharge by discouraging the creation of large impervious surfaces. Additionally, new construction would be required to comply with SFGBO requirements for stormwater treatment and infiltration, potentially increasing groundwater recharge. Similar to the 2004 Housing Element analysis, although the 2009 Housing Element includes policies to encourage new development to attain the RHNA, the 2009 HE does not contain any policies that would directly affect groundwater resources. New construction could affect such issues but would be evaluated on a project-level basis considering the location of development, depth to groundwater, and type of construction being proposed. New construction would also be required to comply with applicable regulations as previously discussed.Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to substantially depleting groundwater supplies or interfering substantially with groundwater recharge.

Impact HY-3: The proposed Housing Elements would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site, or substantially increase the

rate or amount of surface runoff in a manner that would result in flooding on- or offsite. (Less than Significant)

New construction could result in impacts related to the alteration of a drainage pattern or substantially increase the amount of surface runoff if new housing would require extensive grading activities. However, the proposed Housing Elements do not propose new construction. The proposed Housing Elements do, however, provide direction for how and where new residential construction should occur in the City. The City contains many small creeks which historically ran from the east side of the City to the Bay, including Hayes Creek, Arroyo Delores, Mission Creek, Precita Creek, Islais Creek, and Yosemite Creek. The Presidio is home to Lobos Creek and Dragonfly Creek. However, most of these creeks have been filled or run underground in culverts and are not free-flowing on the surface. There are no existing rivers in the City. The potential for on-site erosion of exposed soil surfaces during construction activity is addressed in Impact HY-1. However, new construction would result in grading on project sites, which has the potential to alter existing drainage patterns.

2004 Housing Element

As discussed under Impact HY-1, new construction could result in the need for grading at construction sites that could alter drainage patterns on project sites. New construction associated with housing could result in the alteration of existing drainage patterns by resulting in the need for grading and construction activities. As discussed under Impact HY-1, and throughout this EIR, the 2004 Housing Element contains numerous policies that promote the preservation of existing housing units, potentially resulting in few construction activities that could alter drainage patterns on project sites.

As described above, most of the creeks in the City have been filled or run underground in culverts and are not free-flowing on the surface and there are no existing rivers in the City. The 2004 Housing Element does not contain any policies that would directly affect drainage patterns. New construction could affect such issues, but would be evaluated on a project-level basis considering slope, extent of grading, and site runoff patterns. New development would be required to comply with the previously discussed regulations that would require erosion control measures and stormwater treatment requirements pursuant to the SFGBO, as described under Impact HY-1. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the alteration of existing drainage on project sites that could lead to erosion or siltation or increase the rate of surface runoff in a manner that could result in flooding.

2009 Housing Element Analysis

Similar to the 2004 Housing Element analysis, the 2009 Housing Element includes policies that promote new residential construction to meet the RHNA. Site grading required for construction could alter drainage patterns on individual project sites. However, as discussed under Impact HY-1, and throughout this EIR, the 2004 Housing Element contains numerous policies that promote the preservation of existing housing units, potentially resulting in few construction activities that could alter drainage patterns on project sites. Furthermore, as discussed under Impact HY-1, 2009 Housing Element Policies 2.5, 12.3, and 13.4 and Implementation Measure 102 could reduce the 2009 Housing Element's effects on the alteration of drainage patterns on project sites by discouraging the creation of large impervious surfaces, encouraging the use of non-point source control devices to reduce and filter runoff from project sites, and promote infiltration of stormwater on the project site, thereby reducing runoff.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how and where new residential development should occur and ensures there is adequate land available to meet future housing needs. The 2009 Housing Element does not contain any policies that would directly affect drainage patterns. New construction could affect such issues, but would be evaluated on a project-level basis considering slope, extent of grading, and site runoff patterns. New development would be required to comply with the previously discussed regulations that would require erosion control measures and stormwater treatment requirements pursuant to the SFGBO, as described under Impact HY-1. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to alteration of existing drainage on project sites that could lead to erosion or siltation or increase the rate of surface runoff in a manner that could result in flooding.

Impact HY-4: The proposed Housing Elements would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Less than Significant)

New construction could result impacts related to runoff if new housing would result in the construction of impervious surfaces that could result in an increase in runoff, including polluted runoff, from rooftops and associated parking areas. The proposed Housing Elements do not propose new construction. The proposed Housing Elements do, however, provide direction for how and where new residential construction should occur in the City.

2004 Housing Element and 2009 Housing Element Analysis

The potential impacts of the 2004 Housing Element and 2009 Housing Element related to increased runoff, water quality, and polluted runoff are adequately addressed Under Impact HY-1. In addition, impacts related to stormwater facilities are adequately addressed under Impact UT-2 in Section V.L (Utilities and Service Systems). As discussed under Impact HY-1, the 2004 Housing Element and 2009 Housing Element contain policies that promote new housing construction to meet the RHNA, which could result in the increase of impervious surfaces on projects that could increase runoff, potentially exceeding the capacity of stormwater drainage systems. However, as discussed under Impact HY-1 and throughout this EIR, both the 2004 Housing Element and 2009 Housing Element also contain policies that could reduce potential effects related to stormwater runoff by discouraging demolition, potentially resulting in less construction of new impervious surfaces on project sites. The 2004 Housing Element and 2009 Housing Element would not result in the construction of residential units. However, new development would be required to comply with the previously discussed regulations regarding stormwater runoff, including the SFGBO and SWPPP requirements. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to an increase in the rate of surface runoff in a manner that could exceed the capacity of stormwater drainage systems or result in substantial sources of polluted runoff.

Impact HY-5: The proposed Housing Elements could direct housing that could be located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map or place within a 100-year flood hazard area structures that would impede or redirect flood flows. (Less than Significant)

New construction could result in impacts related to a 100-year flood hazard if housing is placed within a 100-year flood hazard area. Figures V.P-2 and V.P-3 show the available housing unit capacity and pipeline units that are anticipated to be developed, or have the potential for residential development, within FIRM preliminary areas and flood prone areas as determined by the SFPUC, respectively. Figure V.P-3 shows areas prone to flooding due to their location at or below sea level or sewer level. According to this data, approximately 17,841 units in the City's pipeline occur within preliminary FIRM areas, with the capacity for another 469 units. The areas of the City most susceptible to flooding in FIRM preliminary areas are the Candlestick, Treasure Island, and Hunters Point Shipyard neighborhoods. Approximately 23,798 units in the City's pipeline occur within areas prone to flooding as determined by the SFPUC, with the capacity for another 12,558 units. The areas of the City most susceptible flooding due to their location at or below sea level are the Candlestick, Treasure Island, Mission Bay, and SoMa neighborhoods. Figure V.P-4 shows the available housing unit capacity and pipeline units that are anticipated to be developed, or have the potential for residential development, within areas of potential inundation due to rising sea levels. According to this data, approximately 18,064 units in the city's pipeline occur within inundation zones, with the capacity for another 528 units. The areas of the City most susceptible to SLR are the Candlestick, Treasure Island, Mission Bay, and Hunters Point Shipyard neighborhoods. The placement of housing in these areas would result in the exposure of an increased number of people to flood hazards.

Flood risk assessment and some flood protection projects are conducted by federal agencies including FEMA and ACE. The flood management agencies and cities implement the NFIP under the jurisdiction of FEMA and its Flood Insurance Administration. Currently, the City of San Francisco does not participate in the NFIP and no flood maps are published for the City. However, FEMA is preparing FIRMs for the City and County of San Francisco for the first time. FIRMs identify areas that are subject to inundation during a flood having a 1 percent chance of occurrence in a given year (also known as a "base flood" or "100-year flood"). FEMA refers to the flood plain that is at risk from a flood of this magnitude as a special flood hazard area ("SFHA").

Because FEMA has not previously published a FIRM for the City and County of San Francisco, there are no identified SFHAs within San Francisco's geographic boundaries. FEMA has completed the initial phases of a study of the San Francisco Bay. On September 21, 2007, FEMA issued a preliminary FIRM of San Francisco for review and comment by the City. The City has submitted comments on the preliminary FIRM to FEMA. FEMA anticipates publishing a revised preliminary FIRM in 2009, after completing the more detailed analysis that Port and City staff requested in 2007. After reviewing comments and appeals related to the revised preliminary FIRM, FEMA will finalize the FIRM and publish it for flood insurance and floodplain management purposes.

FEMA has tentatively identified SFHAs along the City's shoreline in and along the San Francisco Bay consisting of Zone A (in areas subject to inundation by tidal surge) and Zone V (areas of coastal flooding

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Figure V.P-3 Potential Housing Units: Capacity and Pipeline Units within Flood Prone Areas

▨ Flood Prone Areas

Parks

Water

Notes

1 Numerical values represent housing capacity within flood prone areas followed by net pipeline units within these areas (Housing Unit Capacity/ Pipeline Units), except as noted below

2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated

3 These flood prone areas represent blocks identified by the Public Utilities Commission as prone to flooding due to their location at or below sea level or below sewer level

0 0.5 1 Mile

Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Flood Prone Areas CCSF Public Utilities Commission, 2009

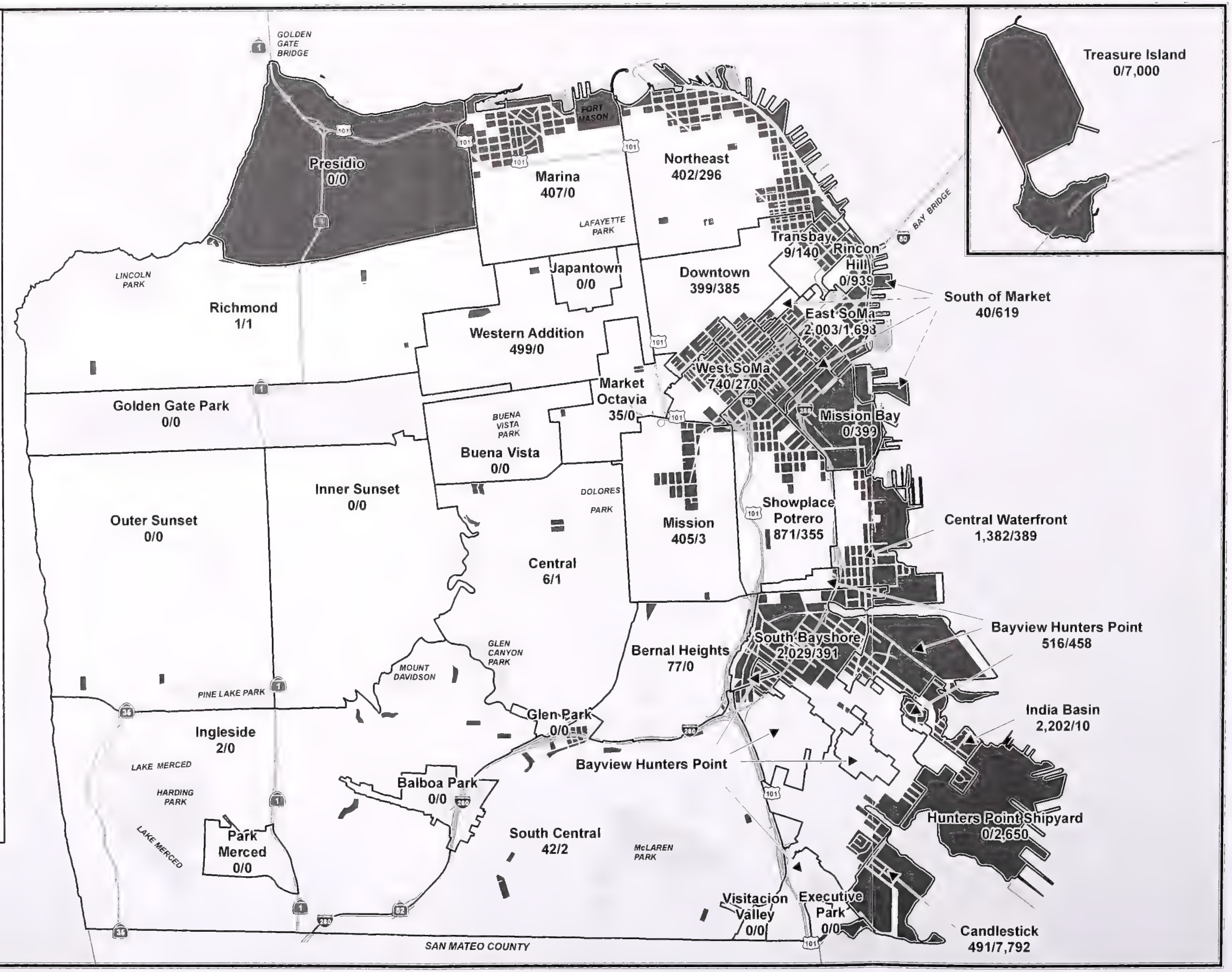

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Figure V.P-4
Potential Housing Units: Capacity and Pipeline Units in Areas at Risk of Inundation Due to Rising Sea Levels

▨ Potential Inundation Due to 55 Inches of Sea Level Rise

Parks

Water

Notes

1 Numerical values represent housing capacity within the areas at risk of inundation due to rising sea levels followed by net pipeline units within these areas (Housing Unit Capacity/ Pipeline Units), except as noted below.

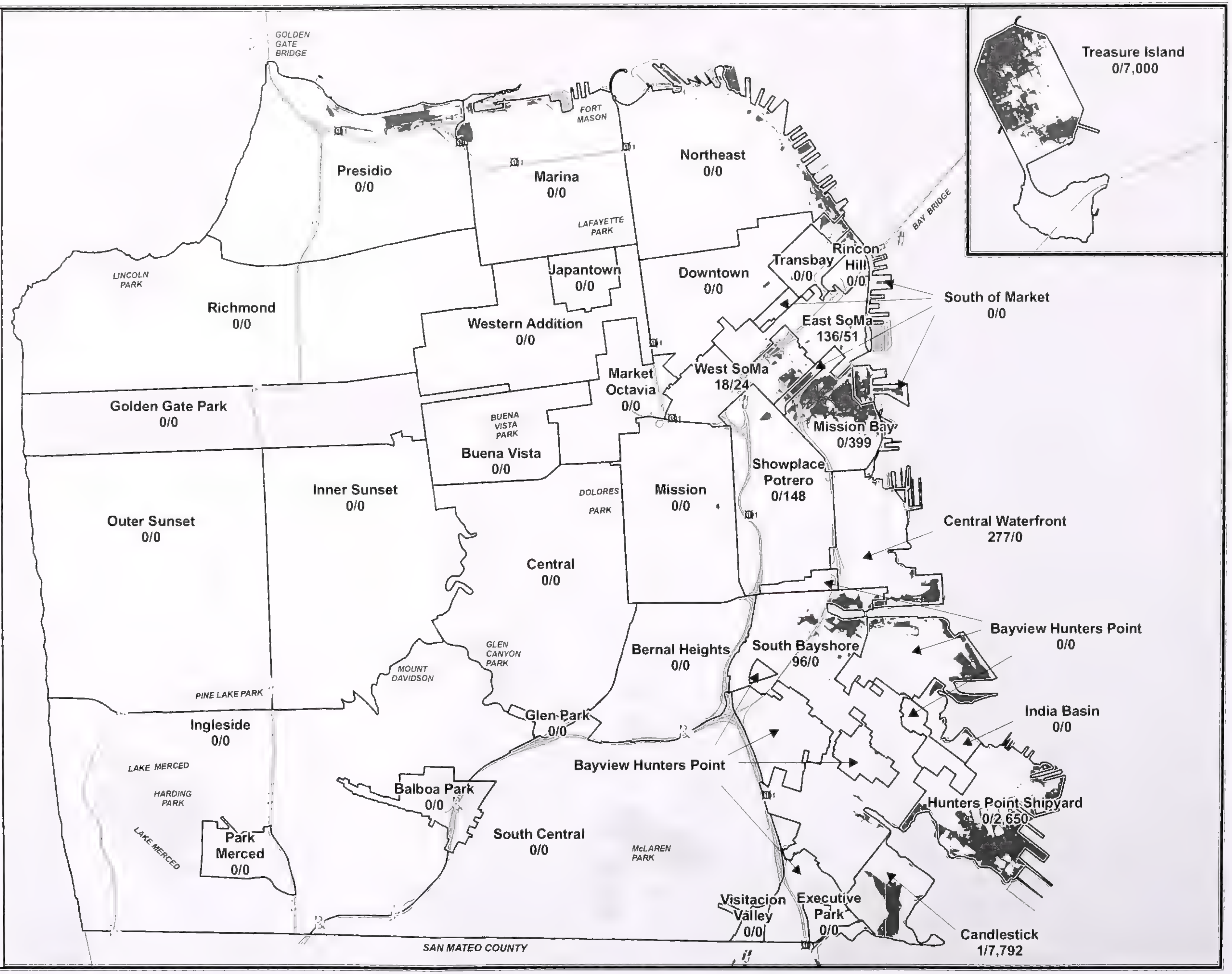
2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated.

3 "Potential inundation due to 55 inches of sea level rise" refers to areas potentially inundated during an average monthly high tide, factoring in 55 inches of sea level rise

4 This sea level information does not include the western shoreline. The Pacific Institute has mapped sea level rise along the western shoreline, however, their projections indicate that sea level rise along the western shoreline would not affect San Francisco capacity or pipeline units.

0 0.5 1 Mile

Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Sea Level Rise Bay Conservation and Development Commission, 2009



subject to wave hazards).[26] On June 10, 2008, legislation was introduced at the San Francisco Board of Supervisors to enact a floodplain management ordinance to govern new construction and substantial improvements in flood prone areas of San Francisco, and to authorize the City's participation in NFIP upon passage of the ordinance. Specifically, the proposed floodplain management ordinance includes a requirement that any new construction or substantial improvement of structures in a designated flood zone must meet the flood damage minimization requirements in the ordinance. The NFIP regulations allow a local jurisdiction to issue variances to its floodplain management ordinance under certain narrow circumstances, without jeopardizing the local jurisdiction's eligibility in the NFIP. However, the particular projects that are granted variances by the local jurisdiction may be deemed ineligible for federally backed flood insurance by FEMA.

Once the Board of Supervisors adopts the Floodplain Management Ordinance, the Department of Public Works will publish flood maps for the City, and applicable City departments and agencies may begin implementation for new construction and substantial improvements in areas shown on the Interim Floodplain Map.

2004 Housing Element and 2009 Housing Element Analysis

As discussed under Impact HY-1, the 2004 Housing Element and 2009 Housing Element contain policies that encourage the construction of new housing, some of which could be constructed within a 100-year flood hazard area as mapped on a FEMA Flood Hazard Boundary or FIRM or other authoritative flood hazard delineation map. The placement of housing in these areas could result in the exposure of an increased number of people to flood hazards.

The 2004 Housing Element contains policies that direct growth to Downtown and mixed-use neighborhoods (typically SoMa). As shown in Figure V.P-2, many parcels located in the SoMa neighborhood have been identified by the SFPUC as areas prone to localized flooding. The 2009 Housing Element promotes housing near transit and through community planning processes. Directing housing near transit is unlikely to promote housing within the flood areas identified in the preliminary FIRM map (Figure V.P-2) or areas susceptible to SLR (Figure V.P-4). However, many transit lines pass through SoMa and other areas identified by the SFPUC as being prone to flooding (Figure V.P-3). Therefore, the 2009 Housing Element contains policies that could direct new housing to areas prone to flooding. However, with respect to both the 2004 Housing Element and 2009 Housing Element, new construction within flood prone areas identified by the SFPUC would be required to undergo a review process to avoid flooding problems caused by the relative elevation of a structure to the hydraulic grade line in the sewers. Both the 2004 Housing Element and 2009 Housing Element encourage housing or direct growth through community planning processes, which would be subject to their own environmental review to consider elements such as placing housing in areas susceptible to floods, during a separate environmental review.

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[26] City and County of San Francisco, Office of the City Administrator, National Flood Insurance Program Flood Sheet, http://www.sfgov.org/site/uploadedfiles/risk_management/factsheet.pdf, accessed July 31, 2008

Development in the City and County of San Francisco must account for flooding potential. Areas located on fill or bay mud can subside to a point at which the sewers do not drain freely during a storm (and sometimes during dry weather) and there can be backups or flooding near these streets and sewers. The City has implemented a review process to avoid flooding problems caused by the relative elevation of the structure to the hydraulic grade line in the sewers. Applicants for building permits for either new construction, change of use (Planning Department) or change of occupancy (DBI), or for major alterations or enlargements are referred to the SFPUC for a determination of whether a project would result in ground-level flooding during storms. The side sewer connection permits for these projects are reviewed and approved by the SFPUC at the beginning of the review process for all permit applications submitted to the Planning Department, DBI, or the Redevelopment Agency. The SFPUC and/or its delegate (DPW, Hydraulics Section) review the permit application and comment on the proposed application and the potential for flooding during wet weather. The permit applicant shall refer to SFPUC requirements for information required for the review of projects in flood-prone areas. Requirements may include provision of a pump station for the sewage flow, raised elevation of entryways, and/or special sidewalk construction and the provision of deep gutters. As required, the sponsor for a project would coordinate a review with SFPUC in order to determine if a project would result in ground-level flooding during storms and will incorporate any required design measures, as applicable.

Although the 2004 Housing Element and 2009 Housing Element contain policies that direct growth to mixed-use districts, many of which are located in the SoMa areas and subject to flooding as identified by the SFPUC, new construction on SFPUC-identified parcels are required to comply with the previously discussed regulations. Neither the 2004 Housing Element nor the 2009 Housing Element would directly or indirectly encourage housing within the preliminary FIRM map or within sites susceptible to SLR. The standard for flood protection established by FEMA, and used by the State CEQA Guidelines, is the 1-in-100 annual exceedance probability, commonly referred to as the "100-year flood event" (i.e., the flood that has a 1 percent chance of occurring in any given year). Future residential development would be subject to review for location in a flood zone, which could include the following actions: a detailed computerized flood hazard analysis in accordance with current standards set forth by FEMA, requirements for inclusion of appropriate flood plain management measures incorporated into the location and design of new buildings that are within a flood zone, and any other appropriate mitigation measures made by a qualified civil engineer or hydrologist. It is anticipated that the Floodplain Management Ordinance will require, in general, that the first floor of structures in flood zones must be constructed above the base flood elevation or flood-proofed. New residential development constructed in these areas would comply with these requirements.

Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the placement of housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other authoritative flood hazard delineation map or placement of structures within a 100-year flood hazard area that would impede or redirect flood flows.

Impact HY-6: The proposed Housing Elements would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. (Less than Significant)

New construction could result in impacts related to flooding if housing is placed near aboveground reservoirs and tanks. Dams and reservoirs which hold large volumes of water represent a potential hazard due to failure caused by ground shaking. The San Francisco Water Department owns aboveground reservoirs and tanks within the City. The San Francisco Water Department also monitors its facilities and submits periodic reports to the California Department of Water Resources, DOSD, which regulates large dams.[27] The City's largest reservoir is the Sunset Reservoir located in the Outer Sunset area. Future residential development in this area would be subject to risk from flooding in the event of failure of that reservoir. The SFPUC has nearly completed a seismic retrofit of the City's largest reservoir, the Sunset Reservoir. The north basin roof, columns and beams have been seismically reinforced. Earlier in the project, the earth embankment around the reservoir was stabilized. The DOSD mandated that SFPUC undertake this work to minimize potential for movement during an earthquake.[28] Completion of this project will further reduce flooding risks in this area.

2004 Housing Element and 2009 Housing Element Analysis

As discussed under Impact HY-1, the 2004 Housing Element and 2009 Housing Element contain policies that encourage the construction of new housing, some of which could be located near an existing aboveground reservoir. The placement of housing in these areas could result in the exposure of an increased number of people to flood hazards.

As discussed under Impact HY-1, the 2004 Housing Element includes policies to promote new housing. New housing ultimately constructed near aboveground reservoirs could result in significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a reservoir. The 2009 Housing Element promotes housing near transit and through community planning processes. However, as discussed under Impact HY-1 and throughout this EIR, both the 2004 Housing Element and 2009 Housing Element also contain policies that could reduce potential effects related to flooding due to dam or levee failure by discouraging demolition, potentially reducing the amount of new construction required to meet the City's housing demand, which could reduce housing construction near aboveground reservoirs and tanks. Both the 2004 Housing Element and 2009 Housing Element encourage housing or direct growth through community planning processes, which would be subject to their own environmental review to consider elements such as placing housing in areas susceptible to floods, during a separate environmental review. Similarly, new housing construction would be subject to project-level environmental review and the potential of the project to expose people to flooding from dam or levee failure.

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[27] Id.

[28] SFPUC, website, accessed February 24, 2009.

As discussed above, the City monitors all reservoirs in the City. Additionally, the SFPUC is completing a project that will significantly reduce any risks of flooding from the City's reservoirs, including the Sunset Reservoir. Neither the 2004 Housing Element nor the 2009 Housing Element would directly or indirectly encourage housing near aboveground reservoirs or tanks. New housing construction may occur in these areas, but would be subject to project-level environmental review that considers existing site conditions. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to impacts from the placement of housing or significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a dam or levee.

Impact HY-7: The proposed Housing Elements would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (Less than Significant)

New construction could result in impacts related to inundation by seich, tsunami, or mudflow if housing is placed near open water, near bodies of water, or near steep slopes in the City. Placement of housing in these areas would result in the exposure of an increased number of people to inundation by seiche, tsunami, or mudflow hazards. Tsunamis are a series of water waves that is caused by the displacement of a large volume of a body of water. The San Francisco General Plan's 20-Foot Tsunami Run-up Map displays areas of the City where tsunamis are thought to be possible. The areas adjacent to the Bay in the northeastern, eastern, southeastern, and western portions of the City are displayed as areas of potential inundation by tsunamis. The City is in the process of evaluating areas subject to risk of tsunami. A seiche is an oscillation of a body of water. Seiches occur most frequently in enclosed or semi-enclosed basins, such as lakes, bays, or harbors, and may be triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides. Therefore, areas inside the San Francisco Bay and near Lake Merced are potentially subject to seiche. A seiche larger than four inches is considered unlikely to occur; therefore, the risk of seiche is not significant. Mudflows, or mudslides, may occur on steeper slopes in San Francisco during periods of heavy rain.

2004 Housing Element and 2009 Housing Element Analysis

As discussed under Impact HY-1, the 2004 Housing Element policies promote increased density more so than the 1990 Residence Element. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process. Promoting increased density could place more people near open water, near bodies of water, or near steep slopes in the City. This could result in significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

However, as discussed under Impact HY-1 and throughout this EIR, both the 2004 Housing Element and 2009 Housing Element also contain policies that could reduce potential effects related to flooding due to dam or levee failure by discouraging demolition, potentially reducing the amount of new construction required to meet the City's housing demand. Therefore, fewer housing units could be constructed with the potential to be inundated.

Although the 2004 Housing Element and the 2009 Housing Element contain policies that promote increased residential density, none of the policies would directly or indirectly place housing in areas of the City potentially resulting in hazards from seiche, tsunami, or mudflow. Further, new development would be required to comply with the previously discussed regulations, including DBI approval of the final plans for any specific development. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the construction of housing in areas that are potentially subject to risk of tsunami, seiche, or mudflows.

Cumulative Impacts

The geographic context for cumulative hydrology and water quality impacts is the entire City of San Francisco. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the project area or immediately adjacent to its project boundaries resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to hydrology and water quality. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing Elements. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans that are intended to reduce impacts related to hydrology and water quality. The 2004 Housing Element and 2009 Housing Element policies would not directly or indirectly affect hydrology and water quality. New development could affect such issues, but would be evaluated on a project-by-project basis. In addition, the 2004 Housing Element and 2009 Housing Element are public policy documents and would not result in direct significant impacts.

The 2004 Housing Element and 2009 Housing Element would not result in the construction of residential units, although they could enocurage how and where new residential development would occur and would assist in ensuring that there is adequate land available to meet future housing needs. All new development would comply with all applicable federal, state, and local regulations related to hydrology and water quality on a project-by-project basis, which would ensure construction activities would not result in adverse water quality, storm drainage, and flooding impacts. New development occurring in vacant areas that currently serve as groundwater recharge areas would reduce recharge potential within the watershed. The SFPUC RWS Conjunctive Use Program would utilize the South Westside Groundwater Basin in San Mateo County as part of a regional conjunctive use program.[29] Under the program, SFPUC surface water would be used in-lieu of pumping groundwater, in normal and wet years. Reducing such pumping would allow normal surface water recharge to increase the volume of groundwater in storage. This would effectively increase the amount of groundwater in storage available during dry years or in an extended drought. With adherence to applicable regulations governing hydrology and water quality, the potential risks associated with hazardous waste discharge that could affect water quality would be ***less than significant***. The contribution of potential impacts from the proposed Housing Elements to the cumulative hydrology and water quality impacts would not be cumulatively considerable. As such, cumulative impacts would be ***less than significant***.

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[29] San Francisco Public Utilities Commission (SFPUC), 2005 Urban Water Management Plan for the City and County of San Francisco, at page 15, December 2005.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

V. ENVIRONMENTAL SETTING AND IMPACTS
Q. HAZARDS AND HAZARDOUS MATERIALS

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to the use and disposal of hazardous materials, reasonably foreseeable accident conditions involving hazardous materials, hazardous materials exposure to nearby schools, hazardous materials sites, safety hazards related to nearby public airports and private airstrips, impairment of emergency response plans, and fire hazards.

ENVIRONMENTAL SETTING

Hazardous Materials

Hazardous materials, defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released to the workplace or environment. Hazardous materials have been and are commonly used in commercial, agricultural and industrial applications as well as in residential areas to a limited extent. A waste is any material that is relinquished, recycled, or inherently waste-like. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered a hazardous waste if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gasses) in accordance with the criteria established in Chapter 11, Article 3[1]. Article 4 of Chapter 11 lists specific hazardous wastes and Article 5 identifies specific waste categories including Resource Conservation and Recovery Act (RCRA) hazardous wastes, non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes. If improperly handled, hazardous materials and wastes can result in public health hazards, if released to the soil, groundwater, or air in vapors, fumes, or dust.

Typically, industries and institutions within the City that incorporate hazardous materials into their production include, but are not limited to: automotive services, dry cleaners, photo processing, X-ray processing, plastic fabrication, printing and lithography, medical services, school facilities, restaurants, and hotels. Potential hazards associated with hazardous materials including leaks, explosions, and fires.

A business may also use a hazardous material during daily operations. There is a potential for the hazardous material to be released into the environment via air or soil transport or surface runoff. Hazardous waste is often a by-product of many industrial processes.

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[1] California Department of Toxic Substances Control, characteristics of Hazardous Waste, website: http://www.dtsc.ca.gov/LawsRegsPolicies/Title22/upload/OEARA_REG_Title22_Ch11_Art3.pdf accessed June 21, 2010.

Hazardous materials may be released into the environment through a number of methods. Toxins may escape into the environment through poorly sealed landfill areas, incineration, and other hazardous waste disposal techniques. An accident may occur during transport of the hazardous substance, exposing persons to noxious gas or possible contact with the toxin. In addition, the substance may enter the storm drain system and ultimately enter the ocean if it leaks onto the street. Storage facilities may leak, allowing the release of a hazardous substance into the environment. In some cases, the hazardous substance may leach through the soil and reach the groundwater.

The City includes industrial, residential, and commercial land uses. Current significant uses of hazardous materials within the City may include diesel fuel, engine oils, gasoline, solvents, and other chemicals. Historical significant uses of hazardous materials within the City may include the use of asbestos-containing materials (ACMs), lead-based paint (LBP), and polychlorinated biphenyls (PCBs).

Fill Materials

Extensive portions of San Francisco's shoreline are underlain by artificial fill. In San Francisco, the fill materials were primarily obtained from dune sands, quarried rock (including serpentinite bedrock found in many areas of San Francisco), industrial refuse, and building debris following the 1906 earthquake. The composition of the artificial fill can be highly variable, ranging from cobble to boulder sized rubble mixed with sand and gravel. The larger sized material includes such items as concrete, bricks, porcelain, glass, and wood.

Hazardous materials used in the industries that were destroyed during the 1906 fire and earthquake were commonly incorporated into the building debris, which was then incorporated into the earthquake fill, and built upon during reconstruction. Because of this historical practice, the 1906 earthquake fill commonly contains polynuclear aromatic hydrocarbons (PAHs),[2] heavy metals, oil and grease, and volatile organic compounds.[3] The existence of hazardous materials in the earthquake fill is one of the reasons for enactment of Article 22A of the San Francisco Health Code (previously referred to as the Maher Ordinance), which is described below in Regulatory Setting. Article 22A requires site assessments at specified sites located eastward (bayward) of the historic 1851 high tide line where the land has been filled, unless a waiver is granted by the Director of the San Francisco Department of Public Health (or the Director designee). Depending on the results of the site assessments, mitigation can be required to clean up hazardous materials identified in the soil. Figure V.Q-1 illustrates the areas of the City that are subject to the Maher Ordinance and areas of known serpentine rock or artificial fill.

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[2] PAHs are group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. PAHs usually occur naturally, but they can be manufactured. A few PAHs are used in medicines and to make dyes, plastics, and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the environment in the air, water, and soil. They can occur in the air, either attached to dust particles or as solids in soil or sediment.

[3] Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids, such as paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, and office equipment (i.e., copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions).

Hazardous Building Materials

Hazardous building materials are included in this discussion because future development may involve demolition or renovation of existing structures that may contain hazardous building materials. Some building materials commonly used in older buildings could present a public health risk if disturbed during an accident or during demolition or renovation of an existing building. Hazardous building materials include asbestos, electrical equipment such as transformers and fluorescent light ballasts that contain PCBs or di (2 ethylhexyl) phthalate (DEHP), fluorescent lights containing mercury vapors, and LBP. Asbestos and LBP may also present a health risk to existing building occupants if they are in a deteriorated condition. If removed during demolition of a building, these materials would also require special disposal procedures.

Asbestos Containing Materials

Asbestos is a common name for a group of naturally occurring fibrous silicate minerals that are made up of thin but strong durable fibers. Building materials containing asbestos were commonly used in structures between 1945 and 1980. These materials include vinyl flooring and mastic, wallboard and associated joint compound, plaster, stucco, acoustic ceiling spray, ceiling tiles, heating system components, and roofing materials. Airborne particles of asbestos have been found to be hazardous to human health. The Occupational Safety and Health Administration (OSHA) defines ACMs as those materials that contain more than one percent asbestos. The National Emissions Standards for Hazardous Air Pollutants (NESHAP) sets standards for the use, removal, and disposal of ACMs. The Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2, regulates asbestos as a toxic material and lists requirements to limit asbestos emissions associated with building demolition and renovation.[4]

Lead-Based Paint

LBP is considered a health hazard for people, especially children. From the turn of the century through the 1940s, paint manufacturers used lead as a primary ingredient in many oil-based paints. The use of lead in paint decreased but still occurred until 1978 when it was banned from residential use. California law requires that all residential buildings constructed on or before January 1, 1979, or schools constructed on or before January 1, 1993, to be presumed to contain LBP. Structures (residential, commercial, or industrial) are affected by LBP regulations if remodeling, renovations, or demolition activities would disturb LBP surfaces. BAAQMD Regulation 11, Rule 1, regulates the emission of lead into the atmosphere and provides a manual of procedures for handling lead materials.[5]

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[4] Bay Area Air Quality Management District, Regulation 11 Hazardous Pollutants, Rule 2 Asbestos Demolition, Renovation and Manufacturing, Adopted December 15, 1976.

[5] Bay Area Air Quality Management District, Regulation 11 Hazardous Pollutants Rule 1 Lead, March 17, 1982.

Polychlorinated Biphenyls

PCBs are a group of synthetic organic chemicals that were used extensively as insulators in electrical equipment such as transformers, ballasts in fluorescent lighting, circuit breakers, and switchgear. In 1976, the Environmental Protection Agency (EPA) banned the manufacture and sale of PCBs. However, PCBs may still be present in older capacitors or transformers. It should be assumed that any transformers contain PCBs unless otherwise marked.

Permitted Hazardous Materials Uses

Permitted uses of hazardous materials include those facilities that use hazardous materials or handle hazardous wastes in accordance with current hazardous materials and hazardous waste regulations. Because the use and handling of hazardous materials at permitted sites are subject to strict regulation, the potential for a release of hazardous materials from these sites is considered low unless there is a documented chemical release at that same site. In such cases, the site would also be tracked in the environmental databases as an environmental case site. Permitted sites without documented releases are nevertheless potential sources of hazardous materials in the soil and/or groundwater (compared to sites where there are no hazardous materials) because of the potential for accidental spills, incidental leakage, or spillage that may have gone undetected.

Existing Hazardous Materials/Environmental Case and Spill Sites

Environmental cases are those sites that are suspected of releasing hazardous materials or have had cause for hazardous materials investigations and are identified on regulatory agency lists. Identification of hazardous materials in the soil or groundwater at these sites is generally due to site disturbance activities, such as removal or repair of an underground storage tank (UST), a spill of hazardous materials, or excavation for construction. The status of each environmental case varies and can be either active (ongoing investigations or remediation), closed (remediation or cleanup completed and approved by the regulatory agency), or unknown. However, the status can change with time, and new cases are periodically added to the databases.

In general, the potential for environmental hazards associated with these listings include but are not limited to soil, soil vapor, and/or groundwater contaminated by unauthorized release of hazardous materials or wastes from industrial processes, chemical storage tanks, water treatment systems, pipelines, landfills, or transportation accidents.

Figure V.Q-2 depicts potentially contaminated sites within the City.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

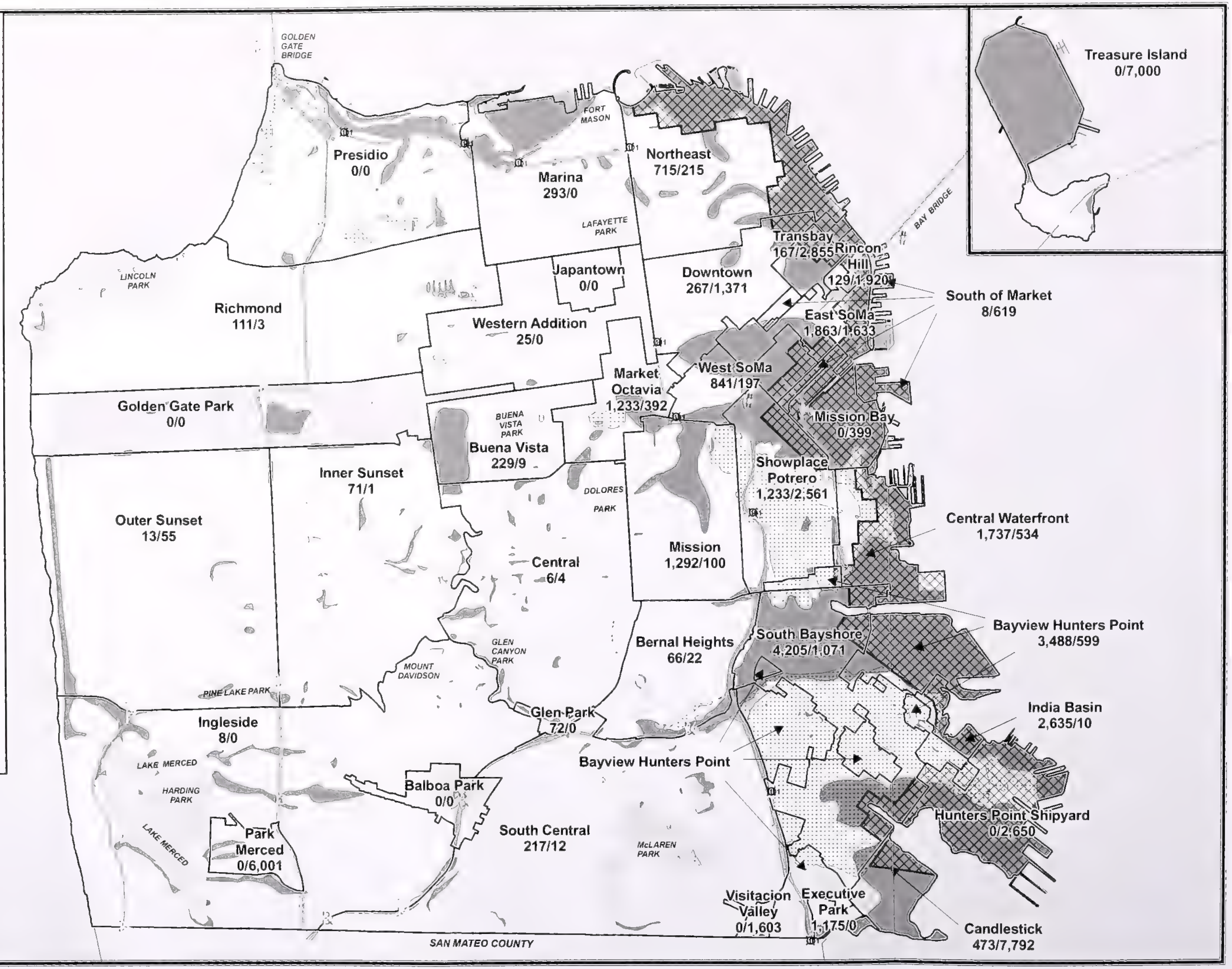
Figure V.Q-1 Potential Housing Units: Capacity and Pipeline Units within Potential Hazard Sites

▨ Maher Ordinance
░ Serpentine Rock
▓ Artificial Fill
Parks
Water

Notes

1 Numerical values represent housing capacity within the potential hazard sites (Maher, Serpentine or Artificial Fill) followed by net pipeline units within these sites (Housing Unit Capacity/ Pipeline Units), except as noted below.

2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated.



Sources
Capacity and Pipeline: CCSF Planning Department, Q1 2009
Potential Hazard Sites: United States Geological Survey, January 2010.

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT

Figure V.Q-2 Potential Housing Units: Capacity and Pipeline Units within Potential Contaminated Sites

▲ Geotracker Potential Contaminated Sites

CCSF Potential Contaminated Sites

Parks

Water

Notes

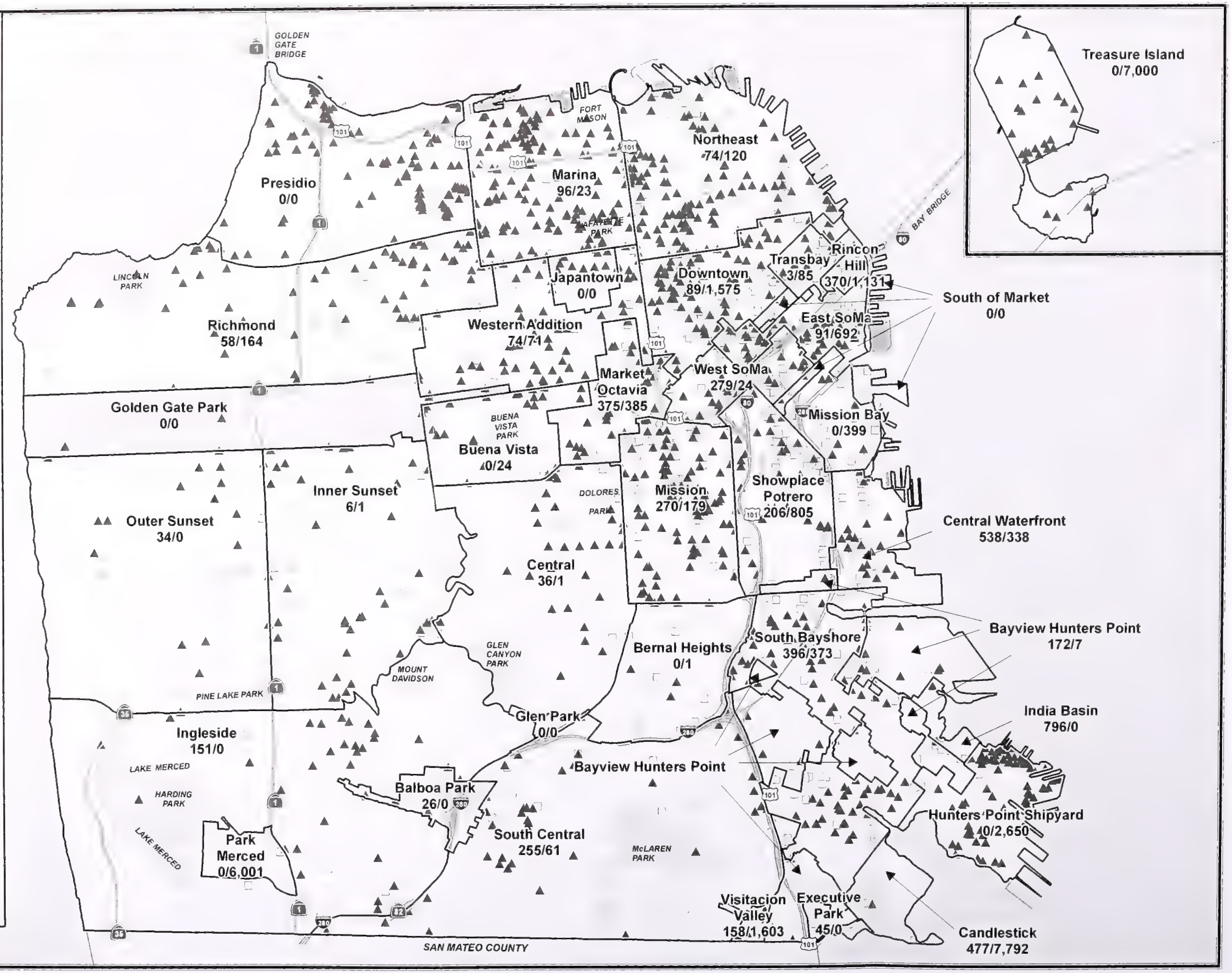
1 Numerical values represent housing capacity within Geotracker and CCSF potential contaminated sites followed by net pipeline units within these sites (Housing Unit Capacity/ Pipeline Units), except as noted below

2 Within the Mission Bay, Hunters Point, Candlestick Point, Visitacion Valley, and Treasure Island Redevelopment Areas, as well as the Park Merced area plan, the specific locations of housing units are unknown, therefore total net units anticipated under those plans are indicated

3 Geotracker is a database that tracks regulatory data about leaking underground fuel tanks (LUFT), Department of Defense Spills-Leaks-Investigations-Cleanup (SLIC) and landfill sites Geotracker also includes data on public drinking water wells and non-underground storage tank clean up cases

0 0.5 1 Mile

Sources
Capacity and Pipeline CCSF Planning Department, Q1 2009
Geotracker Sites California State Water Resources Control Board, September 2009
CCSF Potential Contaminated Sites CCSF Department of Public Health, September 2009



Comprehensive Environmental Response, Compensation, and Liability Information System

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is a database of potential and confirmed hazardous waste sites where the EPA Superfund program is involved in the oversight. It contains sites that are either proposed to be or are on the National Priorities List (NPL), as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.

Cortese List

The Hazardous Waste and Substances Sites (Cortese) list is a tool used by the State and local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California EPA to develop an updated Cortese List at least annually.

Resource Conservation and Recovery Act Information System (RCRIS)

The Resource Conservation and Recovery Act Information System (RCRIS) database includes selected information on sites that generate, store, treat or dispose of hazardous waste as defined by the Act, compiled by the US Environmental Protection Agency. Hazardous waste information is contained in the RCRIS, a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984. A Hazardous Waste Query for the City of San Francisco was used to retrieve data from the RCRAInfo database in Envirofacts. A search for all handler universes (transport, storage, disposal facilities, and other universes) reported 1,112 RCRIS facilities in the City of San Francisco.[6]

California Hazardous Material Incident Report System (CHMIRS)

The California Hazardous Material Incident Report System (CHMIRS) contains information on reported hazardous material incidents, i.e., accidental releases or spills as reported by the California Office of Emergency Services (OES). A Spill Report search for San Francisco returned 434 incidents reported between January 4, 2006 and March 29, 2009. The most predominant type of spill involved petroleum. An inventory of CHMIRS documents for incidents within the City can be viewed at the OES website.[7]

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[6] U.S. Environmental Protection Agency, Envirofacts Warehouse, RCRAInfo ,website: http://oaspub.epa.gov/enviro/FII_MASTER.fii_retrieve?program_search=2&city_name=San+Francisco&county_name=san+francisco&state_code=CA&epa_region_code=09&univ_search=0&procname=&LIBS=&page_no=3&database_type=RCRAINFO&report=1&last_facility=CAUNIVERSITY+OF+SAN+FRANCISCOCAD000629964#bottom, accessed April 3, 2009.

Leaking Underground Storage Tanks

The SFBRWQCB also maintains an Underground Storage Tank Program (UST Program) that deals specifically with leaking fuel tanks. While there may be other constituents of concern resulting from leaking fuel tanks, the primary substance of concern of this program is fuel. Most frequently, these fuel tank leaks are associated with common neighborhood gasoline service stations. There are almost 2,000 LUST clean-up sites in the City, approximately 200 of which have an open and active status. An inventory of LUST sites, including the site name, address, and cleanup status, located within the City can be viewed at the State Water Resources Control Board's website.[8]

Solid Waste Facilities/Landfill Sites (SWIS)

The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills compiled from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database. A review of the list reveals eleven SWIS sites in San Francisco. Six of the sites are under the operational status of "Active" and the remaining five are "Closed".[9]

Toxic Release Inventory

The Toxics Release Inventory (TRI) is an EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain industry groups as well as federal facilities. TRI sites are known to release toxic chemicals into the air. The EPA closely monitors the emissions from these facilities to ensure that their annual limits are not exceeded. TRI reports provide accurate information about potentially hazardous chemicals and their uses to the public in an attempt to give communities more power to hold companies accountable for their actions and to make informed decisions about how such chemicals should be managed. According to the EPA records, there are 29 facilities in the City.

Hazardous Waste

Hazardous waste responsibilities are divided among local, state and federal levels of government. Local government (the City and County of San Francisco), takes the lead for land use decisions related to hazardous waste facilities and emergency response programs. The State has also delegated much of its enforcement and inspection function for facilities and those entities using hazardous materials and generating hazardous waste to the local Departments of Public Health. The federal government has taken the lead in regulating and in some cases funding the clean up of past contamination which all levels of government now seek to prevent.[10]

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[7] Office of Emergency Services, Hazardous Materials Spill Report, website: http://www.oes.ca.gov/Operational/MALHaz.nsf, accessed April 5, 2009.

[8] State Water Resources Control Board, Geotracker: selection for San Francisco, CA, website: http://geotracker.waterboards.ca.gov/, accessed April 2, 2009.

[9] California Integrated Waste Management Board, Solid Waste Information System (SWIS) Facility Site Listing, website: http://www.ciwmb.ca.gov/SWIS/SearchList/List?COUNTY=San+Francisco&LEA=38-AA, accessed April 3, 2009.

The California Hazardous Waste Control Law requires a Hazardous Waste Generator, which stores or accumulates hazardous waste for periods greater than 90 days at an on site facility or for periods greater than 144 hours at an offsite or transfer facility, or facility that treats or transports hazardous waste, to obtain a permit to conduct such activities. Most of the City's hazardous waste generators do not have a permit to store, treat or transport hazardous waste. Thus, the Hazardous Waste Law limits the City's Hazardous Waste Generators to onsite storage of hazardous waste at an unlicensed facility to 90 days and off site storage to 144 hours. It also restricts the City's Hazardous Waste Generators from treating their wastes or from transporting hazardous waste. Violators of the Hazardous Waste Law are subject to civil and criminal penalties up to $250,000 per day for each violation and jail time.[11]

Fire Hazards

The City ensures fire safety primarily through provisions of the Building Code and the Fire Code. Existing and new buildings are required to meet standards contained in these codes. In addition, the final building plans for any new residential project greater than two units are reviewed by the SFFD, as well as the Department of Building Inspection, to ensure conformance with these provisions. Subsequent development projects would be required to conform to these standards, which (depending on the building type) may include development of an emergency procedure manual and an exit drill plan. San Francisco does not contain any State Responsibility Area (SRA) land, and therefore does not have any California Department of Forestry and Fire Protection-identified Fire Hazard Safety Zones.[12]

Airport Safety

The Airport Division of the SFFD is responsible for providing fire protection, water rescue operation, fire prevention, code enforcement, emergency medical services, hazardous materials abatement, community-based fire safety, fire extinguisher training, CPR, and Automatic External Defibrillator (AED) training and re-certification for the San Francisco International Airport (SFO) community.[13] With SFO being the tenth busiest airport in the United States, the Airport Division, in assistance with other Airport safety and security personnel, is tasked with ensuring the protection of over half a million passengers each week.

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[10] City of San Francisco General Plan, Environmental Protection Element.

[11] San Francisco Department of Public Health, Hazardous Waste, website: http://www.sfdph.org/dph/EH/HazWaste/default.asp, accessed April 5, 2009.

[12] California Department of Forestry and Fire Protection, San Francisco County FHSZ Map, website: http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_sanfrancisco.php, accessed April 5, 2009.

[13] San Francisco Fire Department, Airport Division: About Us, website: http://www.sfgov.org/site/sffd_page.asp?id=56730, accessed April 5, 2009.

City Programs

The City's Department of Public Health (SFDPH), Environmental Health Section strives to promote health and quality of life by ensuring healthy living and working conditions in the City. The Environmental Health Section is responsible for developing and implementing programs that manage hazardous materials. In addition, the City has prepared the 72hours.org initiative which includes local outreach and disaster preparedness programs.

Local Oversight Program

The SFDPH's Local Oversight Program (LOP) provides regulatory oversight at UST release sights, in accordance with state laws, regulations and SFRWQCB policies.[14] The LOP encourages the use of risk-based, cost-effective investigative and remedial technologies to mitigate impacted soil and groundwater. The LOP strives to protect human health, the environment and preserve valuable water resources for current and future use. Pursuant to the California Code of regulations, Title 23 Waters, Article 11, Corrective Action, LOP staff perform the following tasks: identify the party responsible for unauthorized releases of petroleum hydrocarbons from leaking USTs; review, comment, and approve of hydrogeological reports, feasibility studies, and work plans for soil and groundwater characterization and remedial action; review monitoring data to evaluate the effectiveness of the remedial strategy; certify that the site has been successfully remediated to a level that is protective of human health and the environment; provide regulatory guidance to consultants, contractors, real estate agents, property owners, concerned citizens, etc. and interface with the State Water Resources Control Board and the SFBRWQCB.

Asbestos Program

The Asbestos Program identifies and keeps records of ACMs in City-owned buildings and provides consulting to City departments regarding all aspects of managing asbestos in buildings.[15] In addition, the Asbestos Program, in compliance with Assembly Bill 3713 of the California Health and Safety Code, issues and updates asbestos notices to city agencies and their employees on a yearly basis. These notices contain summaries of both suspect and sampled asbestos containing building materials that may exist in specific City-owned or leased buildings.

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[14] San Francisco Department of Public Health, Hazardous Waste: Local Oversight Program, website: http://www.sfdph.org/dph/EH/HazWaste/hazWasteLOP.asp, accessed April 5, 2009.

[15] San Francisco Department of Public Health, Hazardous Waste: Asbestos Program, website: http://www.sfdph.org/dph/EH/Asbestos/default.asp, accessed April 5, 2009.

Emergency Response

The release of hazardous material to the environment could cause a multitude of problems to the environment, property, or human health.[16] The SFDPH's Environmental Health Section maintains staff to immediately respond to hazardous materials emergencies that occur in the City. The emergency responders serve as technical consultants for the SFFD Hazardous Materials Team. Staff will also coordinate other environmental health emergencies. Staff is available 24 hours a day, seven days a week and respond only to calls from the SFFD, the San Francisco Police Department, or other public safety agencies.

Hazardous Material Unified Program Agency (HMUPA)

As the Unified Program Agency for the City and County of San Francisco, HMUPA staff provides oversight of businesses regulated in any one of the following nine program elements: Hazardous Waste Generators; Hazardous Waste Treatment; Hazardous Waste Materials Business Plan; Underground Storage Tanks; Aboveground Storage Tanks; Regulated Substances; Chlorofluorocarbon Recycling; Diesel Back-Up Generators; and Medical Waste.[17] The number of regulated businesses (as of July 2008) in each program element is as follows:

- Hazardous Waste Generators: 1,200 plus an additional 100 minimal quantity generators
- Hazardous Waste Treatment
    - Conditionally exempt: 6
    - Conditionally authorized: 1
    - Permit by rule: 2
- Hazardous Materials Business Plan: 2,200 plus an additional 150 medical specialty facilities that store minimal quantities of medical gases
- Underground Storage Tanks
    - Facilities: 270
    - Tanks: 600
- Above Ground Storage Tanks: 90

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[16] San Francisco Department of Public Health, Hazardous Waste: Emergency Response, website: http://www.sfdph.org/dph/EH/Emergency/default.asp, accessed April 5, 2009.

[17] San Francisco Department of Public Health, Hazardous Waste: Hazardous Materials Unified Program Agency (HMUPA), website: http://www.sfdph.org/dph/EH/HMUPA/default.asp, accessed April 5, 2009.

- Regulated Substances: All store ammonia – 3
- Chlorofluorocarbon Recycling: 70
- Medical Waste: 100, plus an additional 1,000 small quantity generators that have filed a one-time application

Lead Prevention Services

The SFDPH's Environmental Health Section provides information and services related to the prevention of lead contamination. The SFDPH provides information and education to parents and customized training to community agency staff, enforces the San Francisco Health Code, requiring housing free of lead hazards, provides case management support to families of children with lead exposure, and provides property owners access to the Mayor's Office of Housing lead hazard remediation grants.[18] The SFDPH also supports coalitions and communities advocating for policies and practices to promote healthy homes and healthy neighborhoods. In particular, the SFDPH provides staff support to the Board of Supervisors Asthma Task Force efforts to improve asthma management and prevention.

REGULATORY SETTING

Federal

U.S. Environmental Protection Agency

The U.S. EPA is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are contained mainly in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws:

- Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S. Code [USC] 6901 *et seq.*);
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also called the Superfund Act) (42 USC 9601 *et seq.*); and
- Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99–499).

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. The EPA provides oversight and supervision for federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

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[18] San Francisco Department of Public Health, Hazardous Waste: Children's Environmental Health Promotion, website: http://www.sfdph.org/dph/EH/CEHP/default.asp, accessed April 5, 2009.

Hazardous Substances

Hazardous substances are a subclass of hazardous materials. They are regulated under CERCLA and SARA. Under CERCLA, the EPA has authority to seek the parties responsible for releasing hazardous substances and to ensure their cooperation in site remediation. CERCLA also provides federal funding (the "Superfund") for remediation.

SARA Title III, the Emergency Planning and Community Right-to-Know Act, requires companies to declare potential toxic hazards to ensure that local communities can plan for chemical emergencies. The EPA maintains a National Priority List of uncontrolled or abandoned hazardous waste sites identified for priority remediation under the Superfund program. The EPA also maintains the CERCLIS database, which contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities across the nation.

Hazardous Wastes

Hazardous wastes, although included in the definition of hazardous materials and hazardous substances, are regulated separately under RCRA. Waste can legally be considered hazardous if it is classified as ignitable, corrosive, reactive, or toxic. Title 22, Section 66261.24 of the California Code of Regulations (CCR) defines characteristics of toxicity. Under RCRA, the EPA regulates hazardous waste from the time that the waste is generated until its final disposal. RCRA also gives the EPA or an authorized state agency the authority to conduct inspections to ensure that individual facilities are in compliance with regulations, and to pursue enforcement action if a violation is discovered. The EPA can delegate its responsibility to a state if the state's regulations are at least as stringent as the federal ones. RCRA was updated in 1984 by the passage of the federal Hazardous and Solid Waste Amendments, which required phasing out land disposal of hazardous waste.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides federal control of pesticide distribution, sale, and use. The EPA was given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by the EPA. Registration assures that pesticides will be properly labeled and that if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Clean Air Act

The federal Clean Air Act requires the EPA to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112 of the Clean Air Act, the EPA established National Emissions Standards for Hazardous Air Pollutants (NESHAP) to protect the public. Asbestos was one of the first hazardous air pollutants regulated under Section 112. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of asbestos-containing material. Accordingly, the asbestos NESHAP regulations specify work practices to be followed during demolitions and renovations of all structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units). In addition, the regulations require the owner of the building and/or the contractor to notify applicable state and local agencies and/or EPA regional offices before all demolitions, or before renovations of buildings that contain a certain threshold amount of asbestos. ACMs must be removed under controlled conditions before demolitions so that asbestos fibers are not released into the air, and asbestos-containing waste materials must be sealed in leak-tight, properly labeled containers and disposed of only at approved sites.

Clean Water Act

The Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States. The Act does not deal directly with ground water or with water quantity issues. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. SDWA does not regulate private wells which serve fewer than 25 individuals. SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The EPA, states, and water systems then work together to make sure that these standards are met.

Toxic Substances Control Act (TSCA)

The Toxic Substances Control Act granted EPA authority to create a regulatory framework to collect data on chemicals in order to evaluate, assess, mitigate, and control risks that may be posed by their manufacture, processing, and use. TSCA provides a variety of control methods to prevent chemicals from posing unreasonable risk. TSCA standards may apply at any point during a chemical's life cycle. Under TSCA Section 5, EPA has established an inventory of chemical substances. If a chemical is not already on the inventory, and has not been excluded by TSCA, a pre-manufacture notice (PMN) must be submitted to EPA before manufacture or import. The PMN must identify the chemical and provide available information on health and environmental effects. If available data are not sufficient to evaluate the chemical's effects, EPA can impose restrictions pending the development of information on its health and environmental effects. EPA can also restrict significant new uses of chemicals based on factors such as the projected volume and use of the chemical. Under TSCA Section 6, EPA can ban manufacture or distribution in commerce, limit use, require labeling, or place other restrictions on chemicals that pose unreasonable risks. Among the chemicals EPA regulates under Section 6 authority are asbestos, CFCs, lead, and PCBs.

Occupational Safety and Health Administration (OSHA)

Worker health and safety is regulated at the federal level by the OSHA. Under this jurisdiction, workers at hazardous waste sites (or workers coming into contact with hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response regulations.

State

California hazardous materials laws incorporate federal standards, but are often stricter than federal laws. The California Department of Toxic Substances Control (DTSC) is responsible for regulating the management of hazardous substances including the remediation of sites contaminated by hazardous substances. The RWQCB is authorized by the SWRCB to enforce water quality regulations, and the BAAQMD governs requirements on remediation and other activities to protect ambient air quality from dust or other airborne contaminants. Other state laws also regulate USTs containing hazardous substances. Enforcement is conducted by the SFDPH and is described further below.

Under California law, a hazardous material is defined as "any material that, because of its quantity, concentration, or physical or chemical characteristics poses a significant present or potential hazard to human health and safety or to the environment if released." Hazardous materials include, but are not limited to, "hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or environment" (Cal. Health & Safety Code §25501(o)). Hazardous wastes are wastes that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed (Cal. Health & Safety Code §25517). The following plans, programs, and permits oversee the handling of hazardous waste.

Hazardous Waste Generator Requirements

Facilities that generate more than 100 kilograms per month of hazardous waste or more than one kilogram per month of acutely hazardous waste must be registered in accordance with the RCRA.

Underground and Aboveground Storage Tank (AST) Permits

Facilities with ASTs or USTs must have permits. Other plans, such as a Spill Prevention Control and Countermeasures (SPCC) Program, may be required due to the size and type of hazardous materials stored in the ASTs. The SPCC Program provides a detailed engineering analysis of the potential for release from oil-filled equipment, and describes the measures, such as secondary containment and emergency response, that must be implemented to reduce the release potential.

Hazardous Materials Business Plan (Business Plan)

Facilities that use, store, or handle hazardous materials in quantities greater than 500 pounds, 55 gallons, or 200 cubic feet are required to prepare a Business Plan and comply with Uniform Fire Code requirements for storage of hazardous materials. The Business Plan must contain facility maps, up-to-date inventories of all hazardous materials for each shop/area, locations of product transfer areas, emergency response procedures, equipment, and a description of employee training.

Hazardous Material Release Response Plan (Contingency Plan)

All facilities that generate hazardous waste must prepare a Contingency Plan. The Contingency Plan identifies the duties of the facility Emergency Coordinator and location of emergency equipment, and includes reporting procedures for the facility Emergency Coordinator to follow after a hazardous materials incident.

California Accidental Release Program (CalARP)

Businesses that use significant quantities of acutely hazardous materials must prepare a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. CalARP requirements typically apply to heavy industrial properties such as factories and refineries.

Injury and Illness Prevention Plans

The California General Industry Safety Order requires that all employers in California prepare and implement an Injury and Illness Prevention Plan, which should contain a code of safe practice for each job category, methods for informing workers of hazards, and procedures for correcting identified hazards.

Emergency Action Plans

The California General Industry Safety Order requires that all employers in California prepare and implement an Emergency Action Plan. The Emergency Action Plan designates employee responsibilities, evacuation procedures and routes, alarm systems, and training procedures.

Fire Prevention Plans

The California General Industry Safety Order requires that all employers in California prepare and implement a Fire Prevention Plan. The Fire Prevention Plan specifies areas of potential hazard, persons responsible for maintenance of fire prevention equipment or systems, fire prevention housekeeping procedures, and fire hazard training procedures.

Hazard Communication Plans

Facilities involved in the use, storage, and handling of hazardous materials are required to prepare a Hazard Communication program. The purpose of the Hazard Communication program is to provide methods on safe handling practices for hazardous materials, ensure proper labeling of hazardous materials containers, and ensure employee access to Material Safety Data Sheets (MSDS).

California Division of Occupational Safety and Health

Worker health and safety in California is regulated by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA). California standards for workers dealing with hazardous materials (including hazardous wastes) are contained in CCR Title 8 and include practices for all industries (General Industrial Safety Orders), and specific practices for construction, hazardous waste operation, and emergency response. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Wildland Fire Safety (State Responsibility Areas)

State Responsibility Areas include areas of the state where the financial responsibility of preventing and suppressing fires has been determined (pursuant to Section 4125 of the Public Resources Code) to be primarily the responsibility of the state. In recognition of the severity of wildland fire hazards in certain areas of California, the state enacted legislation (see California Public Resources Code, Section 4291) requiring local jurisdictions to adopt minimum recommended standards pertaining to road standards for fire equipment access and standards for identifying streets, roads, and buildings; to specify minimum private water supply reserves for emergency fire use; and to require fuel breaks and greenbelts to achieve fuel reductions. With certain exceptions, all new development and construction in State Responsibility Areas after July 1, 1991 must meet the new standards. The state requirements do not supersede more stringent local regulations. The project area is not within a State Responsibility Area.

California Office of Emergency Services

The California Office of Emergency Services (Cal/OES) is the state office responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. Cal/OES regulates businesses by requiring them to prepare an inventory of hazardous materials.

California Department of Transportation and California Highway Patrol

The California Department of Transportation and California Highway Patrol (CHP) enforce and monitor U.S. Department of Transportation hazardous materials and waste transportation laws and regulations in California. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for, and obtain, a hazardous materials transportation license from the CHP. When transporting explosives, inhalation hazards, and highway route–controlled quantities of radioactive materials, safe routing and safe stopping-places are required, as described in 26 CCR Section 13 *et seq*.

Asbestos Airborne Toxic Control Measure

The California Air Resources Board adopted the Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations, which became effective by the BAAQMD on November 19, 2002. This control measure protects public health and the environment by requiring the use of best available dust mitigation measures to prevent off-site migration of asbestos-containing dust from road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas of ultramafic rock, serpentine, or asbestos. The BAAQMD implements the regulation.

California Land Reuse and Revitalization Act

Properties with abandoned, idled, or underused industrial and commercial facilities are referred to as Brownfields, where redevelopment or expansion is complicated by suspected or identified past pollution. Historically, the development potential of these sites has adversely affected the unknown costs associated with cleanup of existing contamination and because of the potential for assuming the long-term liability associated with contamination at a property. Both the federal government and the state have developed "Brownfield Initiatives" to reduce or eliminate barriers to development of these properties. The California Land Reuse and Revitalization Act, which took effect, for five years only, on January 1, 2005, allows some landowners to obtain immunity from liability for certain hazardous materials response costs and other damages if they assess and clean up the property as necessary and enter into an agreement with a regulatory oversight agency for the implementation of assessments and response actions. Specific public participation requirements apply to response actions conducted.

Regional / Local

Air Quality Permits for Stationary Sources

Facilities that emit pollutants into the air from sources other than motor vehicles and consumer products are required to have permits from the BAAQMD. See Section V.H (Air Quality) for details on air quality and toxic air contaminants regulations.

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. General Plan objectives and policies relevant to hazards and hazardous materials are discussed in Section IV.A (Plans and Policies) of this Draft EIR. Applicable General Plan Objectives and Policies discussed in this Section are as follows:

Policy 2.12: Enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.

Policy 3.1: Promote greater public awareness of disaster risks, personal and business risk reduction, and personal and neighborhood emergency response.

Policy 3.3: Maintain a local organization to provide of emergency services to meet the needs of San Francisco.

Policy 3.4: Maintain a comprehensive, current Emergency Operations Plan, in compliance with applicable state and federal regulations, to guide the response to disasters. Conduct periodic exercises of the EOP.

Policy 3.5: Maintain an adequate Emergency Command Center.

Policy 3.7: Establish a system of emergency access routes for both emergency operations and evacuation.

Emergency Management Program

The Emergency Operations Plan (EOP) implements many of the emergency response policies of the Community Safety Element of the General Plan. San Francisco's Department of Emergency Management has initiated the process of updating the 2005 Citywide EOP. The primary focus of the revision process has been the departure from a single, all-encompassing plan, which describes emergency management phases. This will provide the City with a more comprehensive Emergency Management Program. Under this new concept, the following plans align with the four phases of emergency management: Administrative Plan, Preparedness Plan, Hazard Mitigation Plan, Emergency Response Plan, and Recovery Plan. Together, this collection of documents, when completed, will fully replace the 2005 EOP.

The City's newly developed Emergency Response Plan, denotes the first step in the revision process capturing the "response" element from the 2005 EOP, and addressing City "response" activities in an individual plan. This plan describes at a high level what the City's actions will be during a response to an emergency. Forthcoming annexes to this plan will describe in more detail the actions required of City departments/agencies.

Hazard Mitigation Plan

San Francisco completed the 2008 Hazard Mitigation Plan to assess risks posed by natural and human-caused hazards and to develop a mitigation strategy for reducing the City's risks. The City has prepared the Plan in accordance with the requirements of the Disaster Mitigation Act of 2000, required by federal law as a condition of receiving hazard mitigation grants after a declared disaster. The Department of Emergency Management, Division of Emergency Services, has coordinated the preparation of the 2008 Plan, which replaces the 2005 Plan, in cooperation with other city agencies and departments.

San Francisco Public Works Code

Article 20 of the San Francisco Public Works Code includes provisions regarding soil analysis reports as required for building permit applications. Building permit applications are generally not considered complete until the Director of Public Health reviews and accepts the findings of the soil analysis report. The report must show either that no hazardous wastes are present in the soil, or if wastes are present, that the applicant has certified that any necessary mitigation is complete.

All-Hazards Strategic Plan

The 2008 All-Hazards Strategic Plan increases the City's ability to deter, prevent, respond to, and recover from acts of terrorism and natural- and human-caused disasters. The Division of Emergency Services coordinated and facilitated the development of the Strategic Plan with the participation of more than 156 stakeholders from more than 100 agencies, including City departments, nonprofts and the private sector. Together, a single, common preparedness vision and strategy was developed. This plan will provide the basis of ongoing work to achieve a culture of preparedness in San Francisco in coordination with the region.

San Francisco Public Health Code

The SFDPH often acts as the lead agency to ensure proper remediation of LUST sites and other contaminated sites in San Francisco. Local regulations have been enacted to address the potential to encounter hazardous materials in the soil at development sites and the safe handling of hazardous materials (including hazardous wastes). The following sections of the San Francisco Health Code, briefly summarized, could apply to sites to be developed or reused within the City. These include Article 22A (Analyzing the Soil for Hazardous Waste, formerly the Maher Ordinance), Article 21 (Hazardous Materials), Article 21A (Risk Management Program), and Article 22 (Hazardous Waste Management).

An Article 22A investigation is required if: (1) more than 50 cubic yards of soil are to be disturbed, (2) the project site is bayward of the 1851 high-tide line (i.e., in an area of Bay fill), as designated on an official City map, or (3) the site is at any other location in the City designated for investigation by the Director of the SFDPH. The reports are submitted to the Department of Public Works (DPW) and SFDPH. Article 22A regulations take effect at the time of the building permit application for projects located on filled land requiring excavation.

Article 21 of the Health Code provides for safe handling of hazardous materials in the City. It requires any person or business that handles, sells, stores, or otherwise uses specified quantities of hazardous materials to keep a current certificate of registration and to implement a hazardous materials business plan. A special permit is required for USTs. Article 21A of the Health Code provides for safe handling of federally regulated hazardous, toxic, and flammable substances in the City, requiring businesses that use these substances to register with the SFDPH and prepare a Risk Management Plan that includes an assessment of the effects of an accidental release and programs for preventing and responding to an accidental release.

Article 22 of the Health Code provides for safe handling of hazardous wastes in the City. It authorizes the SFDPH to implement the state hazardous waste regulations, including authority to conduct inspections and document compliance. In addition, construction, demolition, or renovation work that results in disturbance of LBP must comply with Section 3407 of the San Francisco Building Code.

Emergency Response Plan

The City has an Emergency Response Plan (ERP) that was developed to ensure allocation and coordination of resources in the event of an emergency in the City and County of San Francisco (CCSF). The ERP describes at a high level what the City's actions will be during an emergency response.

As discussed previously, forthcoming annexes and appendices to this plan will describe in more detail response actions and hazards specific to CCSF. While these additional plans are in development, existing departmental plans and hazard-specific annexes remain in effect. Further, this plan describes the role of the Emergency Operations Center (EOC) and the coordination that occurs between the EOC, City departments, and other response agencies. Finally, this plan describes how the EOC serves as the focal point between federal, state, and local governments in times of disaster.[19] A separate Hazard Mitigation Plan (HMP) assesses risks posed by natural and human-caused hazards and set forth a mitigation strategy for reducing the City's risks. Section 5.2.3.3 of the HMP describes the types, location, and probability of hazardous materials incidents. According to the HMP reports, a hazardous materials event is most likely to occur within the City's industrial area, and along land and water transportation corridors. Trucks and vessels that use these transportation corridors commonly carry a variety of hazardous materials, including gasoline, other petroleum products, and other chemicals known to cause human health problems. The HMP also notes comprehensive information on the probability and magnitude of a hazardous material event along the transportation corridors is not available. Wide variations among the characteristics of hazardous material sources and among the materials themselves make such an evaluation difficult. However, based on previous occurrences, San Francisco can expect, on average, a hazardous material event every 4 years due to a truck accident and 7 times a year due to a large vessel accident as a result of equipment failure or operator error.[20]

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[19] City and County of San Francisco, Emergency Response Plan, an Element of the CCSF Emergency Management Program, April 2008. A copy of this document is on file for public review at the San Francisco Redevelopment Agency, One South Van Ness Avenue, Fifth Floor as part of File No. ER06.05.07, or at the Planning Department, 1650 Mission Street, Fourth Floor, San Francisco, CA, 94103 as part of File No. 2007.0946E.

[20] City and County of San Francisco, Emergency Response Plan, Emergency Support Function #10 Oil and Hazardous Materials Response Annex. A copy of this document is on file for public review at the San Francisco Redevelopment Agency, One South Van Ness Avenue, Fifth Floor as part of File No. ER06.05.07, or at the Planning Department, 1650 Mission Street, Fourth Floor, San Francisco, CA, 94103 as part of File No. 2007.0946E.

San Francisco Department of Public Health Hazardous Materials Unified Program Agency

Cal/EPA has adopted regulations implementing a "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste on-site treatment, underground storage tanks, aboveground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous substances management plans and inventories. The program is implemented at the local level by a local agency—the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction.

The San Francisco Department of Public Health HMUPA has been granted authority by the State under the Unified Program to enforce the program element regulations pertaining to hazardous materials in the City. These include permitting for hazardous materials storage, underground storage tanks, and hazardous waste generation under the SFDPH Certificate of Registration Program, described below.

A Hazardous Materials Compliance Certificate is awarded to businesses registered with the City's SFDPH that provide required annual information as applicable to their facility including: hazardous materials and wastes inventories, use, materials reduction, on-site treatment, and employee training; facility maps; emergency response procedures; underground storage tanks management (including forms, leak detection monitoring program, and financial responsibility certificates); medical wastes; regulated substances; aboveground storage tanks; diesel backup generators; and chlorofluorocarbon recovery and recycling. Under the SFDPH HMUPA, building contractors temporarily storing hazardous materials at a construction site must also apply and receive a HMUPA certificate for the storage of hazardous materials during construction and must provide the appropriate fees.

Healthy Development Measurement Tool

The Healthy Development Measurement Tool (HDMT) is a comprehensive evaluation metric to consider health needs in urban development plans and projects. The HDMT explicitly connects public health to urban development planning in efforts to achieve a higher quality social and physical environment that advances health. The fundamental value behind the HDMT is that all communities should have equal access to health resources. As such, HDMT objectives and indicators explicitly call out the need for development that serves existing and new residents and workers. Data are also disaggregated by neighborhood and are illustrated spatially in an effort to highlight disparities. SFDPH has primarily targeted use of the HDMT in communities experiencing health inequities as these communities are most likely to be impacted by new development. Where applied, the HDMT might thus help to achieve a higher quality social and physical environment that protects and promotes health.

Toxics Reduction Program

The San Francisco Department of the Environment Toxics Reduction Program program offers information on environmentally friendly alternatives, safe and convenient disposal of toxic products, and ideas on how to minimize the use of hazardous products and materials. Areas covered include: pest management, toxic product recycling and disposal, home and body products, and greening businesses.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, resulting in a safety hazard for people residing or working in the project area;
- Be located in the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area;
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; and
- Expose people or structures to a significant risk of loss, injury or death involving fires.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how and where new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

The City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip.[21] Therefore, the proposed Housing Elements would have ***no impact*** with respect to air traffic safety.

Impact HZ-1: The proposed Housing Elements would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less than Significant)

Residential uses typically do not generate hazardous materials and household hazardous materials are typically labeled to ensure proper use. The types of potentially hazardous materials associated with residential uses include solvents, paint, batteries, fertilizers, and petroleum products that are packaged and stored for consumer sales. The household transport and storage of these materials would not pose a significant hazard to the public or the environment because household hazardous materials can be disposed of in three ways: 1) home collection service; 2) neighborhood drop-off sites; and 3) household hazardous waste drop-off facilities. Moreover, the San Francisco Department of the Environment conducts education and outreach for proper disposal of household toxics such as through the Toxics Reduction Program. The City also offers free disposal of many toxic household items. Hazardous materials transport may also be associated with new construction due to the required transport of certain building materials to construction sites or redevelopment of sites containing hazardous materials. However, as discussed through this analysis, the project would not directly result in construction activities.

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[21] City/County Association of governments of San Mateo County, San Mateo County Comprehensive Airport Land Use Plan, December 1996.

2004 Housing Element Analysis

The following 2004 Housing Element policies could result in hazards related to the routine transport, use, or disposal of hazardous materials by promoting increased residential density.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). As discussed throughout this EIR, the Housing Elements would not directly result in an increased population, the Housing Element is intended to guide new housing that is projected to occur. However, as discussed above, the 2004 Housing Element does promote increased density. The result of this increase in density may be that greater concentrations of residential hazardous materials are used in a smaller geographic area, thereby increasing the local risk associated with routine transport, use, or disposal of hazardous materials. Additionally, the 2004 Housing Element promotes increased density, which could potentially result in a localized increase in housing construction, which could increase the risk associated with the transport, use, and disposal of hazardous materials encountered during construction. However, as discussed extensively in Section V.E (Cultural and Paleontological Resources) under Impact CP-1, and throughout this EIR, the 2004 Housing Element contains numerous policies that promote the preservation of existing housing units. Preserving existing housing units will reduce the chances that those units become dilapidated, abandoned or unsound, reducing the possible need for replacement housing potentially reducing hazard risks from new construction. Although some 2004 Housing Element policies promote an increase in residential density, which could consolidate residential uses to certain areas of the City, thereby increasing the use of routine household hazardous materials, the 2004 Housing Element would not directly result in the construction of residential units. Overall, the Housing Elements would not result in increased population growth, but would merely direct growth within the City. Increased density could result in increased use of household cleaners. However, as discussed above, household cleaners are appropriately labeled for proper use and disposal. Additionally the Community Safety Element of the General Plan specifies under policy 12.2 that the City shall "*enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases*." Furthermore, the City's toxic reduction program provides drop off locations for many toxic household items. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the routine transport, use, or disposal of hazardous materials.

2009 Housing Element Analysis

Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, the 2009 Housing Element includes policies that promote increased density for affordable housing and through existing community planning processes.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.

Impact	2009 Housing Element	Corresponding 1990 Residence Element
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79. Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

As shown above, the 2009 Housing Element generally promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). As discussed previously, the result of this increase in density may be that greater concentrations of residential hazardous materials are used in a smaller geographic area, thereby increasing the local risk associated with routine transport, use, or disposal of hazardous materials. Increased density could potentially result in a localized increase in housing construction, which could increase the risk associated with the transport, use, and disposal of hazardous materials encountered during construction, as compared to the 1990 Residence Element policies. However, as discussed extensively in Section V.E (Cultural and Paleontological Resources) under Impact CP-1, and throughout this EIR, both the 2009 Housing Element contains numerous policies that promote the preservation of existing housing units. As discussed previously, preserving existing housing units may reduce the need for replacement housing, potentially reducing the risks associated with the transport of hazardous materials associated with new construction. Although some 2009 Housing Element policies promote an increase in residential density, which could consolidate residential uses to certain areas of the City, thereby increasing the use of routine household hazardous materials, the 2009 Housing Element would not directly result in the construction of residential units. Overall, however, the Housing Elements would not result in increased population growth, but would merely direct growth in the City. Increased density could result in increased use of household cleaners. However, household cleaners are appropriately labeled for proper use and disposal. Furthermore, the City's toxic reduction program provides drop off locations for many toxic household items. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the routine transport, use, or disposal of hazardous materials.

Impact HZ-2: The proposed Housing Elements would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant)

Figure V.Q-1 shows the available housing unit capacity and pipeline units that are anticipated to be developed, or have the potential for residential development, within potentially contaminated sites. According to this data, approximately 31,505 units in the city's pipeline occur within the immediate vicinity of potentially contaminated sites, with the capacity for another 5,075 units. The eastern portion of the City is most susceptible to having housing located near potentially contaminated sites, due to this area's history of industrial uses.

Figure V.Q-2 shows the available housing unit capacity and pipeline units that are anticipated to be developed, or have the potential for residential development, within Maher areas, areas containing serpentine rock, or areas containing artificial fill. According to this data, approximately 39,619 units in the city's pipeline occur within the immediate vicinity of these hazardous zones, with the capacity for another 20,008 units. The areas most susceptible to having housing located near these sites are Treasure Island and the Eastern Shoreline.

New housing could result in impacts related to upset and accident conditions because future residential units could be located within potentially hazardous areas (see Figures V.Q-1 and V.Q-2), the construction or operation of which could involve the release of hazardous materials into the environment. For example, new housing located in areas with serpentine rock could potentially expose residents and the environment to naturally occurring asbestos. Additional residential uses could also increase the amount of household hazardous materials stored and used within the City and could therefore increase the risk of onsite upset and accident conditions (this is addressed above, under Impact HZ-1). In addition, the 2004 Housing Element and 2009 Housing Element could result in urban infill and redevelopment along with the intensification of residential development within former industrial areas and Brownfield sites, which could release hazardous materials during construction activities. 2004 Housing Element Policies 1.1 and 1.3 encourage residential uses on formerly industrial sites. 2004 Housing Element Implementation Measure 4.1.4 encourages residential uses on Brownfield sites. 2009 Housing Element Policy 1.3 and Implementation Measures 3 and 4 encourage housing on opportunity sites, which may include former industrial sites or Brownfield sites. The disturbance of soils and the demolition of existing structures could result in the exposure of construction workers or employees to health or safety risks if contaminated structures and/or soils are encountered during construction or maintenance activities. Additionally, demolition of existing structures in the City could result in exposure of construction personnel and the public to hazardous substances such as asbestos or LBP.

Below is a general discussion regarding sources of exposure to various types of hazardous upset and accident conditions.

Sources of Exposure

Exposure to contaminated structures or soil could occur from any of the following:

- Possible asbestos-containing materials and LBP associated with the existing on-site structures, pipes, and/or debris,
- Unknown contaminants that have not previously been identified, and
- Existing contaminants that have been previously identified.

The demolition of older buildings could potentially expose construction workers and nearby residents and/or workers to airborne LBP dust, asbestos fibers, and/or other contaminants. In addition, there is the possibility that future development may also uncover previously undiscovered soil contamination as well as result in the release of potential contaminants that may be present in building materials (e.g., mold, lead, etc.). Policies promoting development on Brownfield, infill, and former industrial sites could potentially expose workers and residents to hazardous materials generated by the site's previous use.

Lead and Asbestos

Federal, state, and local laws and regulations govern handling of building materials that contain LBP. OSHA Lead Construction Standards establish a maximum safe exposure level for the following types of construction work where lead exposure may occur: demolition or salvage of structures where lead or materials containing lead are present; removal or encapsulation of materials containing lead; and, new construction, alteration, repair or renovation of structures or materials containing lead. Typically, building materials with lead-based paint attached are not considered hazardous waste (Chapter II, Division 4.5, Title 22, CCR) unless the paint is chemically or physically removed from the building debris.

San Francisco Health Code, Chapter 34, Section 3407, establishes requirements for projects that disturb lead-based paint on the exterior of buildings or steel structures. The ordinance, implemented by DBI, contains performance standards, including a requirement to establish containment barriers that are at least as effective at protecting human health and the environment as those in the most recent Guidelines for Evaluation and Control of Lead-Based Paint Hazards promulgated by the US Department of Housing and Urban Development (HUD).

In addition, once a structure containing lead-based paint has been properly demolished there are federal and state requirements for future unrestricted residential reuse areas to verify that areas around a former structure were not contaminated with lead prior to or during the demolition process.

The California Air Resources Board ATCM for Construction, Grading, Quarrying, and Surface Mining Operations is intended to protect public health and the environment by requiring the use of best available dust control measures to prevent off-site migration of naturally occurring asbestos-containing dust from road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas of ultramafic rock, serpentine, or asbestos. The ATCM applies to grading or excavation activities, which would involve the excavation of bedrock or fill materials potentially containing naturally occurring asbestos.

For construction activities disturbing less than one acre of area underlain by these types of bedrock potentially containing naturally occurring asbestos, specific dust control measures must be implemented in accordance with the ATCM before construction begins and each measure must be maintained throughout the duration of the portion of the construction project when these types of bedrock are being disturbed. For construction activities disturbing greater than one acre of area underlain by these types of bedrock potentially containing naturally occurring asbestos, construction contractors are required to prepare an Asbestos Dust Mitigation Plan (ADMP) specifying measures that will be taken in an attempt to ensure that no visible dust crosses the property boundary during construction. The ADMP must be submitted to, and approved by, the BAAQMD prior to the beginning of construction, and the site operator must ensure the implementation of all specified dust control measures throughout the construction project. In addition, the BAAQMD may require air monitoring to monitor off-site migration of asbestos dust during construction activities and may change the plan on the basis of the air monitoring results.

The 2004 and 2009 Housing Element policies would not specifically direct new housing to sites with ACM or redevelopment of sites with LBP. Furthermore, new construction would be required to comply with applicable regulations related to LBP and ACM. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the release of hazardous materials into the environment related to LBP and ACM.

Soil and Groundwater Contamination

Unknown Contaminated Sites

Aside from the potential release of hazardous materials from demolition of existing structures within the City, grading and excavation of sites for new housing could also expose construction workers and the public to potentially unknown hazardous substances present in the soil or groundwater. If any unidentified sources of contamination are encountered during grading or excavation, the removal activities required could pose health and safety risks such as the exposure of workers, materials handling personnel, and the public to hazardous materials or hazardous vapors. Such contamination could cause various short-term or long-term adverse health effects in persons exposed to the hazardous substances. In addition, exposure to contaminants could occur if the contaminants migrated from the contaminated zone to surrounding areas either before or after the surrounding areas were developed, or if contaminated zones were disturbed by future development at the contaminated location.

As at any development in an urban setting, particularly one to be constructed on bay fill, there is a potential for construction activities associated with new housing to encounter previously unidentified hazards, such as an abandoned UST located before permitting requirements were imposed, or other hazards (refer to Figures V.Q-1 and V.Q-2). Exposure of construction workers, the public, or the environment to such hazards could result in a significant impact. The purpose of Article 22A is to minimize this potential at construction sites on Bay Fill, by requiring a site evaluation and soil sampling. If the results of the evaluation and testing indicate hazardous wastes are present in soil, site mitigation measures must be identified and a site mitigation report submitted to the City's SFDPH, prior to commencement of construction activities. Nevertheless, there is still some potential that unidentified hazardous material releases could be encountered after compliance with the Article 22A process. For example, if an unidentified UST were discovered during construction activities, it would have to be closed in place or removed. Removal activities could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Similarly, the discovery of buried debris that could be hazardous could also present an increased risk of adverse health or environmental effects.

The likelihood that significant adverse effects would result from the discovery of previously unidentified contaminated sites is minimal because there are multiple existing requirements in place to address such effects, such as Article 22A, SFRWQCB, and SFDPH UST removal and site cleanup requirements, implementation of contingency monitoring procedures and SFRWQCB notification (as necessary), and implementation of a site-specific health and safety plan (HASP) prepared in accordance with Cal/OSHA regulations. Any new development would be subject to environmental review pursuant to CEQA. This evaluation would address any specific conditions that could discover currently unknown contaminates. For example, environmental review may require preparation of a Phase I Environmental Site Assessment. The findings of this assessment may include discovery of past contamination of the site. Under such circumstances, appropriate mitigations would be applied to the project to address the contamination. Furthermore, new construction would be required to comply with applicable regulations, including Article 22A of the Health Code. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the release of hazardous materials into the environment on unknown contaminated sites.

Existing Contaminated Sites

Another potential hazard to construction workers and the public could involve construction activities on existing land uses that may potentially be contaminated. Existing sites that may potentially contain hazardous land uses in the City include industrial sites, sites containing leaking underground storage tanks, and large and small-quantity generators of hazardous waste. As discussed previously, there are also

12 identified sites within the City that are listed in the CERCLIS database. There are 1,112 RCRIS facilities in the City. There are 29 active sites that are known to release toxic chemicals into the air – the EPA monitors these facilities closely to reduce the potential of future emissions at concentrations above the acceptable limits. These sites represent potential health hazards, and have experienced contamination from the release of hazardous substances into the soil. However, any new development occurring on these documented hazardous materials sites would have to be preceded by remediation and cleanup under the supervision of the DTSC before construction activities could begin. New construction would be required to comply with these applicable regulations. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the release of hazardous materials into the environment on existing contaminated sites.

2004 Housing Element Analysis

As discussed under Impact HZ-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 could result in increased density which could indirectly encourage demolition of existing housing to provide for more profitable, higher-density residential developments. This could potentially result in more upset and accident conditions associated with construction. Furthermore, the 2004 Housing Element promotes housing on underutilized, vacant, surplus lands and on Brownfield sites (Implementation Measure 4.1.4), which could be potentially contaminated. Therefore, the 2004 Housing Element could result in potential impacts related to upset and accident conditions. Although some 2004 Housing Element policies could potentially increase this impact, 2004 Housing Element Policy 2.1 and Implementation Measure 3.6.6 could reduce this impact by promoting the preservation of existing housing, thereby reducing the need for new construction and the potential for encountering hazardous materials. Overall, the 2004 Housing Element does this to greater extent than the 1990 Residence Element; however the intent of both documents is similar and this, therefore, does not represent a shift in policy. These preservation-related policies could reduce the pressure for new construction that would otherwise occur to account for units lost due to inhabitability. On the other hand, new construction would reduce the potential for LBP and asbestos exposure for future residents and the environment by removing older housing that could potentially expose residents and the environment to a release of these substances.

The 2004 Housing Element would not result in the construction of residential units, and all new development would be required to comply with all applicable federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and the San Francisco Public Health Code. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to upset and accident conditions involving the release of hazardous materials into the environment.

2009 Housing Element Analysis

As discussed under Impact HZ-1, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. Thus, overall, the impacts related to accident conditions resulting from increased density would likely be lower under the 2009 Housing Element than under the 1990 Residence Element. However, the 2009 Housing Element promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), which have the potential to be contaminated. Although some 2009 Housing Element policies could increase the potential to encounter contaminated sites, 2009 Housing Element Policy 13.4 and Implementation Measure 36 could potentially reduce this impact by encouraging preservation of existing housing units, potentially reducing demolition and the corresponding exposure hazards, as described under Impact HZ-1. Furthermore, as discussed extensively in Section V.E (Cultural and Paleontological Resources) under Impact CP-1, and throughout this EIR, both the 2009 Housing Element contains numerous policies that promote the preservation of existing housing units. Retention of existing housing could reduce the potential for new construction that may occur on contaminated sites, but could also maintain units that may already be contaminated with LBP and ACM.

The 2009 Housing Element would not result in the construction of residential units, though all new development would be required to comply with all applicable federal, state, and local regulations. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to upset and accident conditions involving the release of hazardous materials into the environment.

Impact HZ-3: The proposed Housing Elements would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

Residential uses typically do not generate hazardous materials and household hazardous materials are typically labeled to ensure proper use. The exact location and quantity of hazardous materials associated with new housing is unknown. However, as discussed under Impact HZ-1, an increase in residential uses could result in additional transport, use and disposal of hazardous materials. The majority of the City's industrial and commercial land uses are clustered in the southeastern portion of the City near U.S. Highway 101. However, the Housing Elements would not directly result in new construction or locating new housing near existing or proposed schools and would have no effect on the emission of hazardous substances.

Although hazardous materials and waste generated from construction of housing may pose a health risk to nearby schools, all businesses associated with housing construction that handle or involve on-site transportation of hazardous materials would be required to comply with the provisions of the City's Fire Code and any additional regulations as required in the California Health and Safety Code Article 1 Chapter 6.95 for a Business Emergency Plan, which would apply to those businesses associated with construction activities. Both the federal and state governments require all businesses that handle more than a specified amount of hazardous materials to submit a business plan to a regulating agency. In addition, implementation of federal and state regulations would minimize potential impacts by protecting schools from hazardous materials and emissions. For example, federal regulations such as RCRA would ensure that hazardous waste is regulated from the time that the waste is generated until its final disposal, and NESHAP would protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. The HMUPA is responsible for CUPA authority in the City and would require all businesses handling hazardous materials to create a Hazardous Materials Business Plan which would reduce the risk of an accidental hazardous materials release.

2004 Housing Element Analysis

As discussed under Impacts HZ-1 and HZ-2, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 could promote increased density and housing construction. As discussed above, increased density could increase the concentrations of use of household cleaning items, it is not expected that these policies would directly result in increases in hazardous emissions and most household items are not even acutely hazardous. Furthermore, the 2004 Housing Element would not result in the construction of residential units, and all new development would be required to comply with all applicable federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to hazardous emissions or the handling of hazardous materials within one-quarter mile from a school.

2009 Housing Element Analysis

Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. Furthermore, the 2009 Housing Element does not contain any policies that would directly contribute to the emission of hazardous substances near schools. 2009 Housing Element Policy 13.4 and Implementation Measure 37 support the preservation of existing units and could reduce the amount of demolition and new construction and the corresponding exposure hazards, as described under Impact HZ-1. Furthermore, the 2009 Housing Element would not result in the construction of residential units, and all new development would be required to comply with all applicable federal, state, and local regulations. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to hazardous emissions or the handling of hazardous materials within one-quarter mile from a school.

Impact HZ-4: The proposed Housing Elements would not direct housing that could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, they would not create a significant hazard to the public or the environment. (Less than Significant)

As discussed previously, the City contains sites that have been identified as being contaminated from the release of hazardous substances in the soil, including industrial sites, sites containing leaking underground storage tanks, and large and small-quantity generators of hazardous waste. The 2004 Housing Element and 2009 Housing Element do not propose any changes to allowable uses nor do they propose residential projects. Any new development would be subject to a project-level environmental review. Much of the future residential development would take place on soft sites as discussed in Section IV (Project Description). Many of these sites may also be contaminated, may be former hazardous materials sites, or may contain hazardous materials.

2004 Housing Element Analysis

The following 2004 Housing Element implementation measures could result in impacts related to hazardous materials sites by siting residential uses in formerly commercial or industrial areas and on

Brownfield or infill development sites. As discussed under Impact HZ-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 could promote increased density and housing construction, which could potentially increase development pressure on hazardous materials sites. 2004 Housing Element Implementation Measures 1.3.3 and 4.1.4 are both related to development of Brownfield sites, but are not considered to represent a shift in City policy. 2004 Housing Element Implementation Measure 4.1.7 more generally states that appropriate sites, which could include Brownfields, shall be identified for permanently affordable housing. Because of restrictions already imposed on such sites, there would be no significant impacts related to hazardous materials sites following remediation. Remediation efforts could, however, impact below ground resources including cultural resources, geology and soils, and hydrology and water quality. Impacts related to hazardous waste sites are typically project-specific and projects on Brownfield sites would be subject to the review and/or mitigation imposed by the City's SFDPH and/or the applicable regulator of hazardous waste. Specific mitigation measures would be developed in consultation with the SFDPH based on the real or perceived contaminants that may be onsite.

As discussed above, the 2004 Housing Element includes policies that would encourage higher residential density in underutilized commercial and industrial areas but also stresses that harmful effects should not occur as a result. For the most part, the areas mentioned in 2004 Housing Element Implementation Measure 1.3.2 comprise the Eastern Neighborhoods portion of the City. As outlined in the Eastern Neighborhoods EIR, the change in land use from an existing industrial use to new residential units would require adherence to strict cleanup levels. Compliance with facility closure requirements specified in Article 21 of the San Francisco Health Code, and site assessment and remediation requirements that may be triggered by Article 22A or the California Land Reuse and Revitalization Act, would ensure that the potential for hazardous materials to be present is addressed and that further remediation would be conducted under the oversight of the appropriate regulatory agency, if required. Because of the well-established regulatory framework for site assessment and remediation, impacts related to exposure to hazardous materials due to land use changes are considered less than significant.

Development of Brownfield sites or redevelopment of former commercial and industrial sites to residential uses would be required to undergo remediation and cleanup under DTSC and the SFBRWQCB before construction activities could begin. If contamination at any specific project were to exceed regulatory action levels, the project proponent would be required to undertake remediation procedures prior to grading and development under the supervision of the City's SFDPH, HMUPA, or the SFBRWQCB (depending upon the nature of any identified contamination). The 2004 Housing Element would direct new construction to Brownfield sites and former commercial and industrial sites that would be required to comply with all applicable federal, state, and local regulations. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to development of hazardous materials sites.

2009 Housing Element Analysis

The following 2009 Housing Element implementation measures could result in impacts related to hazardous materials sites by siting residential uses in formerly commercial or industrial areas and on Brownfield or infill development sites. The 2009 Housing Element promotes residential development on surplus, vacant and underused lands (Policy 1.3 and Implementation Measures 3 and 4). These sites may be contaminated from past uses. The 2009 Housing Element also promotes mixed-use development (Policy 1.8 and Implementation Measure 80), which could include residential uses in areas dominated by commercial uses, some of which may include past or present contamination. However, because of restrictions already imposed on such sites, there would be no significant impacts related to hazardous materials sites following remediation. Remediation efforts could, however, impact below ground resources including cultural resources, geology and soils, and hydrology and water quality. Impacts related to hazardous waste sites are typically project-specific and projects on Brownfield sites would be subject to the review and/or mitigation by the City's SFDPH and/or the applicable regulator of hazardous waste. Specific mitigation measures would be developed in consultation with the SFDPH based on the real or perceived contaminants that may be onsite. Furthermore, development of Brownfield sites and/or commercial sites with past or present contamination and proposing residential uses, would be required to undergo remediation and cleanup under DTSC, SFRWQCB and other applicable federal, state and local regulations, as discussed above. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to hazardous materials sites.

Impact HZ-5: The proposed Housing Elements would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

New construction could result in impacts related to interference with an adopted emergency response plan or emergency evacuation plan if new housing would locate residents in areas that would result in congestion of an emergency evacuation route. In the event of a natural disaster, increased congestion could slow an evacuation effort within the City. The City's ERP, prepared in April 2008, was developed to ensure allocation of and coordination of resources in the event of an emergency in the City. The ERP describes the City's actions during an emergency response. The existing street grid provides ample access for emergency responders and egress for residents and workers, and the 2004 Housing Element and the 2009 Housing Element would neither directly nor indirectly alter that situation to any substantial degree.

2004 Housing Element Analysis

As discussed under Impact HZ-1, 2004 Housing Element Policies 1.7, 4.4, 11.6, 11.7, and 11.8 would promote increased density, which could potentially result in a localized increase in congestion, which could interfere with emergency access compared to the 1990 Residence Element policies. The City's Community Safety Element addresses the City's approach to emergency preparedness and response. (See Community Safety Element policies 3.1, 3.3, 3.4, 3.5 and 3.7 at the beginning of this Section.) As discussed in Section V.F (Transportation and Circulations) the Housing Elements would not result in significant impacts related to traffic. Major development projects are subject to MTA's review with City departments. The 2004 Housing Element does not contain any policies that would directly or indirectly interfere with an adopted emergency evaluation plan. New development could affect such issues but would be evaluated on a project-level basis with site design characteristics taken into consideration. All new development would be required to comply with all applicable federal, state, and local regulations. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to interference with an adopted emergency response plan or emergency evacuation plan.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process. The promotion of increased density could potentially result in localized increased congestion in high density areas of the City and along commercial corridors, the downtown and extended downtown, which could result in interference with emergency access. The 2009 Housing Element would not directly result in the construction of residential units and all new development would be required to comply with all applicable federal, state, and local regulations. The 2009 Housing Element would have a ***less than significant*** impact with respect to interference with an adopted emergency response plan or emergency evacuation plan.

Impact HZ-6: The proposed Housing Elements would not expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

2004 Housing Element and 2009 Housing Element Analysis

Implementation of the 2004 Housing Element and 2009 Housing Element could result in impacts related to risks associated with fire if new housing is constructed in near areas with potential for wildland fires or if new housing would include certain features that would put residents or workers at risk. San Francisco ensures fire safety primarily through provisions of the San Francisco Building Code and Fire Code. Existing buildings are required to meet standards contained in these codes. In addition, the building plans for any new residential project greater than two units are reviewed by the Fire Department (as well as the DBI) in order to ensure conformance with these provisions. New buildings and structures would be required to conform to these standards, which (depending on building type) may also include the development of an emergency procedure manual and an exit drill plan. New housing would be built to San Francisco Fire Code standards, which would minimize demand for future fire protection services and lower risk associated with fires. All housing, including high-rise residential buildings up to forty stories, would be required to meet the standards for emergency access, sprinkler and other water systems, and other requirements specified in the San Francisco Fire Code. Standards pertaining to equipment access would also be met. Plan review for compliance with San Francisco Fire Code requirements, to be completed by DBI and the SFFD, would minimize fire-related emergency dispatches, reducing the demand for fire protection services in the City. The 2004 Housing Element and 2009 Housing Element would not directly or indirectly result in any additional exposure of residents or workers to fire risk, as the City, which is not in a designated State Responsibility Area, is a fully urbanized area that lacks the "urban-wildland interface" that tends to place new development at risk in undeveloped areas of California. Undeveloped areas in the City such as Glen Canyon are already closely surrounded by urban uses and the Housing Elements would not measurably increase any risks from fire. Furthermore, the City's ERP, which specifically states the mission, coordination, role, and responsibilities of the Fire and

Rescue Branch in the Operations Support Section would continue to guide the City's actions during an emergency response. The 2004 Housing Element and 2009 Housing Element would not directly result in the construction of new residential units but would direct future growth in the City. Therefore, the 2004 Housing Element and 2009 Housing Element would have a ***less than significant*** impact with respect to the exposure of people or structures to a significant risk of loss, injury, or death involving fires.

Cumulative Impacts

The geographic context for cumulative hazards and hazardous materials impacts is the entire City of San Francisco. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the City resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to hazards and hazardous materials. As discussed throughout this EIR, growth would occur regardless of implementation of the proposed Housing Elements. The proposed Housing Elements merely guide new residential construction with an emphasis on affordability. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans that are intended to reduce impacts related to hazards and hazardous materials. The 2004 Housing Element and 2009 Housing Element policies would not directly result in residential uses that could affect hazards or hazardous materials. New development could affect such issues, but would be evaluated on a project-by-project basis, which would ensure that the routine transport, use, or disposal of hazardous materials would not result in adverse impacts. All demolition activities in the City that would involve asbestos or lead based paint would also occur in compliance with BAAQMD rules and OSHA Construction Safety Orders, which would ensure that impacts related to the release of hazardous materials would be less than significant. Additionally, site-specific investigations would be conducted at sites where contaminated soils or groundwater could occur to minimize the exposure of workers, the public, and the environment to hazardous substances. With adherence to applicable federal, state, and local regulations governing hazardous materials, the potential risks associated with hazardous wastes would be ***less than significant***. The contribution of potential impacts from the proposed Housing Elements to the cumulative hazardous and hazardous materials impacts would not be cumulatively considerable. As such, cumulative impacts would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

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V. ENVIRONMENTAL SETTING AND IMPACTS
R. MINERAL AND ENERGY RESOURCES

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to mineral resources, the availability of locally-important mineral resource recovery sites, and the consumption of large amounts of fuel, water, or energy.

ENVIRONMENTAL SETTING

Mineral

All land in the City is designated Mineral Resource Zone 4 (MRZ-4) by the California Division of Mines and Geology (CDMG) under the Surface Mining and Reclamation Act of 1975.[1] This designation indicates that there is inadequate information available for assignment to any other MRZ and therefore the City is not a designated area of significant mineral deposits. No area within the City is designated as a locally-important mineral resource recovery site.[2]

Energy Resources

Pacific Gas and Electric Company (PG&E) supplies electricity and natural gas to the City.[3] Hydrology, oil, and natural gas comprise the primary energy sources used to generate electricity, with lesser amounts coming from geothermal and nuclear fuels. Most natural gas is shipped either from Canada or the Southwest, with the balance coming from California producers. PG&E will be shifting to an increased deployment of renewable, alternate energy resources such as solar, geothermal, co-generation, and wind. This energy policy envisions and encourages a similar energy future for the City.

The Hetch Hetchy Water and Power (HHWP) system is a conglomerate of dams, hydroelectric plants, reservoirs, aqueducts, pipelines and transmission lines operated by the San Francisco Public Utilities Commission which provides drinking water to the City of San Francisco and several Bay Area counties.[4] The HHWP also provides hydroelectric power for San Francisco municipal uses and for sale to irrigation districts and public utilities. Water flows by gravity through 150 miles of pipelines and tunnels from the crest of the Sierras to San Francisco. As it flows, HHWP puts the water to work. It turns the turbines in four hydroelectric powerhouses, generating approximately 1.6 billion kilowatt hours (kWh) of renewable energy each year. Hundreds of miles of transmission and distribution lines move the electricity from the powerhouses to the San Francisco Bay Area.

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[1] California Division of Mines and Geology, Open File Report 96-03 and Special Report 146 Parts I and II.

[2] City and County of San Francisco, Planning Department, Environmental Protection Element of the General Plan.

[3] Id.

[4] San Francisco Public Utilities Commission, Hetch Hetchy Water and Power, website: http://sfwater.org accessed February 17, 2009.

In 2007, non-residential uses in San Francisco consumed 4,060 million kWh and residential uses consumed 1,451 million kWh, for a total consumption of 5,511 million kWh.[5] Demand is met by a combination of generation and transmission. The Potrero Power Plant is a natural gas and diesel burning plant located in the southeastern area of the City that was built in 1949.[6] Efforts have been made by the City's mayor and city officials to close the power plant, but the California Independent Systems Operator recently ruled that the power plant must continue operating throughout 2010.[7] This plant has the capacity to generate 362 megawatts (MW), which meets some of the local need for electricity. There are two more power plants in the City, the Southeast Digester Gas Cogeneration Plant and the University of San Francisco Cogeneration Plant, which have the capacity to generate 2.1 and 1.5 MW, respectively. The Hunters Point Power Plant, which had the capacity to generate 219 MW was retired in 2006.[8]

The upper San Francisco peninsula functions as a funnel for electric transmission into the City.[9] High voltage transmission lines converge at the San Mateo substation from the south and from the east. From the south, transmission lines from the Tesla, Newark and Ravenswood substations connect into the San Mateo substation. From the east two transmission lines cross the San Francisco Bay and also connect at San Mateo. Power flows from the San Mateo substation northward to San Francisco through one underground 230 kilovolt (kV) transmission line, five overhead 115 kV transmission lines and one 60 kV transmission line to the Martin substation at the San Francisco-San Mateo County line. In addition, on April 29, 2006, the 27-mile Jefferson-Martin 230,000 volt Transmission Line from the Jefferson substation in San Mateo County to the Martin substation was released into service to improve capacity and reliability of the electricity supply in San Francisco and on the Peninsula.[10]

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[5] California Energy Commission, Energy Consumption Data Management System: Electricity Consumption by County, website: http://ecdms.energy.ca.gov/elecbycounty.asp, accessed April 3, 2009.

[6] California Energy Commission, California Electricity Statistics & Data: California Power Plant Database (Excel File), website: http://energyalmanac.ca.gov/electricity/index.html, accessed April 3, 2009.

[7] John Upton, San Francisco Examiner, Potrero Power Plant to Continue Operating Next Year, September 14, 2009, website: http://www.sfexaminer.com/local/Potrero-power-plant-to-continue-operating-next-year-59188087.html, accessed November 4, 2009.

[8] California Energy Commission, Retired and Mothballed California Power Plants - 2002-2006, website: http://energyalmanac.ca.gov/powerplants/retired_plants.html, accessed April 3, 2009.

[9] San Francisco Public Utilities Commission and San Francisco Department of Environment, The Electricity Resource Plan: Choosing San Francisco's Energy Future, Revised December 2002, at page 32.

[10] PG&E, "PG&E Completes Jefferson-Martin 230-Kv Transmission Line In San Mateo County; Will Close Hunters Point Power Plant In May", April 28, 2006, website: http://www.pge.com/about/news/mediarelations/newsreleases/q2_2006/060501.shtml, accessed April 3, 2009.

REGULATORY SETTING

Federal

No federal plans, policies, regulations or laws related to mineral or energy resources are applicable to the proposed project.

State

Surface Mining and Reclamation Act

Gravel mining operations in San Francisco, and throughout the state, are subject to the California Surface Mining and Reclamation Act (SMARA). The purpose of SMARA is to identify and protect areas containing significant mineral resources. In doing so, SMARA a) regulates surface mining operations to assure that adverse environmental effects are prevented or minimized, b) requires reclamation of mined lands to a usable condition that is readily adaptable to alternative land uses, c) produces and conserves minerals, and considers values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment, and d) eliminates residual hazards to the public health and safety. Mining must comply with SMARA through all phases of a project, including the reclamation process.

California Public Utilities Commission

California Public Utilities Commission Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The decision requires permits for the construction of certain power line facilities or substations if the voltages would exceed 50 kV or if the substation would require the acquisition of land or an increase in voltage rating above 50 kV. Distribution lines and substations with voltages less than 50 kV do not need to comply with this decision; however, the utility must obtain any nondiscretionary local permits required for the construction and operation of these projects. CEQA compliance is required for construction of facilities constructed in accordance with the decision.

The Electric Utility Industry Restructuring Act (AB 1890)

According to the California Energy Commission, AB 1890 legislation requires all publicly-owned utilities (POUs) to implement a non-bypassable surcharge to fund public benefit programs. The legislation also includes a formula for calculating this public benefit charge and a description of what values are to be used in the formula. The California Municipal Utility Association prepared an AB 1890 Benefit Program Guidebook, which featured methods for calculating the public benefit charge. The percentage that most of the POUs decided to use is 2.85 percent of their total revenues collected. The specific percentage of 2.85 percent was not written into the legislation; therefore, the actual amount of funds allocated to public benefit programs may vary for each POU. The public benefit program categories to which the POUs have allocated money include:

- Low-Income Assistance Programs;

- Energy Efficiency and Demand-Side Management Programs;
- Research, Development and Demonstration Programs; and
- Renewable Energy Technology and Resource Programs.

Title 20 and Title 24, California Code of Regulations (CCR)

Title 20, Public Utilities and Energy, contains the regulations related to power plant siting certification. Title 24, California Building Standards, contains the energy efficiency standards related to residential and nonresidential buildings. Title 24 standards are based, in part, on a State mandate to reduce California's energy demand. In accordance with Figure 66473.1 of the Subdivision Map Act, Figure 19.24.110, Energy Conservation, requires subdivisions of five or more lots, other than condominium conversions, to provide for, to the extent feasible, future passive or natural heating or cooling opportunities in the subdivision. The County, by State law is responsible for implementing this requirement of the Subdivision Map Act.

The California Green Building Standards Code is Part 11 of Title 24's 12 parts. The purpose of this code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design;
2. Energy efficiency;
3. Water efficiency and conservation;
4. Material conservation and resource efficiency; and
5. Environmental air quality.

Local

San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions and development throughout the City. Of those resources which the State Legislature directed to be included in the Conservation Sections, the Environmental Protection Element notes that mineral resources are not found in San Francisco to any appreciable extent. General Plan objectives and policies relevant to energy are discussed in Section V.A (Plans and Policies) of this Draft EIR.

San Francisco Green Building Ordinance (SFGBO)

In 2008, the City adopted Chapter 13C (Green Building Requirements) into San Francisco Building Code. The purpose of the requirements is to promote the health, safety, and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the City's buildings and by providing a healthy indoor environment. The ordinance includes the requirement that installation of any solar photovoltaic energy system must meet all installation criteria of the California Energy Commission's Guidebook "Eligibility Criteria and Conditions for Incentives for Solar Energy Systems." The Guidebook establishes criteria that require building projects applying for ratepayer-funded incentives for photovoltaic systems meet minimum energy efficiency levels and recommends that photovoltaic system components and installations meet rating standards and specific performance requirements. As a clean renewable energy source, solar energy provides an alternative to fossil fuels.

San Francisco Residential Energy Conservation Ordinance

Chapter 12 and 12A of the San Francisco Housing Code contains the City's residential energy conservation requirements. It is the intent of this ordinance to contribute to the affordability of San Francisco housing by promoting the wise and efficient use of energy through cost-effective energy conservation standards for residential housing. It is also the intent to overcome the current barriers to energy conservation in rental housing and to reduce the impact of rising energy costs upon renters. Per Section 1210, an energy inspection pursuant to Section 1205 and subsequent required energy conservation measures pursuant to Section 1212 are required of residential buildings undergoing the following activities: metering conversion, major improvements, condominium conversion, and complete inspection. Section 1211 also specifies an energy inspection requirement at the transfer of title of any residential building. Section 1212 lists the required energy conservation measures. For a building containing one or two dwelling units, the required measures include ceiling insulation, weatherstripping of all doors, external water heater insulation blanket, low-flow devices on showerheads, caulking or sealing of all accessible major cracks, and insulation of return heating and cooling system ducts and plenums. For buildings with three or more dwelling units, the previous measures apply, in addition to insulation of all accessible recirculating hot water, steam or steam condensate return piping, cleaning and tuning of boiler units, repair of hot water and steam leaks on boiler units, time clock control of burner, and other interim adopted measures.

San Francisco Sustainability Plan

In July 1997 the Board of Supervisors endorsed the Sustainability Plan for the City of San Francisco establishing sustainable development as a fundamental goal of municipal public policy.

GoSolarSF – Solar Energy Incentive Program

On July 1, 2008, the San Francisco Public Utilities Commission (SFPUC) launched their "GoSolarSF" program to San Francisco's businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system, and more to those qualifying as low-income residents. The San Francisco Planning Department and Department of Building Inspection have also developed a streamlining process for Solar Photovoltaic (PV) Permits and priority permitting mechanisms for projects pursuing LEED® Gold Certification. As of January 2010, GoSolarSF has issued payments for 690 solar systems, representing 1.97 MW of power.[11]

San Francisco Green Priority Permitting Program

All applications received by the Planning Department shall be assigned, reviewed, and completed in the order received, except in the following cases: Type 1 (applications for green buildings); Type 2 (applications for certain affordable housing projects); Type 3 (applications for large grocery stores); and Type 2 (other applications).[12] Building construction projects that meet or exceed a Gold Rating using the LEED® program of the U.S. Green Building Council (or that achieve high sustainability standards under other "green building" rating systems approved by the Director) qualify as Type 1 Applications.

Electricity Resource Plan (Revised December 2002)

San Francisco adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco's southeast community, home of two power plants. The plan presents a framework for assuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state;
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan; or
- Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.

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[11] Angela Patane, GoSolarSF, personal correspondence with CAJA staff, January 5, 2010.

[12] San Francisco Planning Department, Director's Bulletin No. 2006-02, dated September 28, 2006, website: http://www.sfenvironment.org/downloads/library/prioritypermitting.pdf, accessed November 13, 2009.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how and where new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

Implementation of the 2004 Housing Element and 2009 Housing Element could result in impacts related to mineral resources if access to a known mineral resource would be blocked. As previously stated, the City is not a designated area of significant mineral deposits and no area within the City is designated as a locally-important mineral resource recovery site. Therefore, there would be ***no impact*** related to the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site.

Impact ME-1: The proposed Housing Elements would not encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (Less than Significant)

New construction could result in impacts related to energy resources if new housing consists of energy inefficient features, construction equipment is energy inefficient, new residential uses are not located near existing alternative transportation infrastructure, or if demolition and new construction results in increased lifecycle energy costs. For example, increases in density would likely be accomplished through the construction of multi-family housing, which uses less fuel, water, and energy than single-family housing. Overall, demand for these resources would be the same under the proposed Housing Elements because the proposed Housing Elements would not result in an increase in population. The proposed Housing Elements would accommodate population growth by increasing density and through other accommodations, while also ensuring that there is sufficient land available to meet future housing needs.

Generally, residential uses use less fuel, water, and energy than industrial or commercial uses and single-family housing uses more fuel, water, and energy than multi-family housing. Placing housing closer to jobs in commercial and industrial areas and near transit would reduce the use of fuel for transportation. In addition, the preservation of existing housing preserves the embodied energy of a building and requires less fuel and energy than the demolition and construction of new housing. Therefore, it is likely that the conversion of industrial and commercial uses to residential uses, construction of multi-family housing instead of single-family housing, the placement of housing near jobs, and the preservation of existing housing would result in a reduction in the use of fuel, water, and energy.

2004 Housing Element Analysis

The 2004 Housing Element does not propose policies that would encourage the use of large amounts of fuel, water, or energy or the use of these resources in a wasteful manner. Furthermore, the following 2004 Housing Element policies could reduce the amount of energy used by residential uses by promoting increased density, promoting residential uses on previous commercial and industrial sites, promoting residential uses near transit, and including energy efficient features in housing. A key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. By discouraging demolition and encouraging the maintenance of the City's existing housing stock, the following 2004 Housing Element policies could reduce the amount of new housing required to meet the City's housing needs and subsequent fuel-, water-, and energy needs associated with demolition and new construction.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.	
	Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.	
	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown.
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served b sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. TH City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
Promote increased density-related development standards	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.7: Encourage and support the construction of quality, new family housing.	
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.
Discourage demolition and improve existing housing supply.	Policy 2.1: Discourage the demolition of sound existing housing.	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.3: Maintain and improve the condition of the existing supply of public housing.	Policy 5.4: Maintain and improve the existing supply of public housing.
Promote preservation of residential buildings.	Policy 3.6: Preserve landmark historic residential buildings.	Policy 5.5: Preserve landmark historic residential buildings.
	Implementation Measure 3.6.6: The Planning Department will encourage property owners to use preservation incentives to repair, restore, or rehabilitate historic resources in lieu of demolition. These include federal tax credits for rehabilitation of qualified historical resources, Mills Act property tax abatement programs, the State Historic Building Code, and tax deductions for preservation easements.	
Promote energy efficient housing development.	Policy 11.10: Include energy efficient features in new residential development and encourage weatherization in existing housing to reduce overall housing costs and the long-range cost of maintenance.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing cost.

As shown above, the 2004 Housing Element promotes housing in commercial (Policies 1.1, 1.6) and industrial (Policies 1.1, 1.3) areas, neighborhood commercial districts (Policy 1.2 and Implementation Measure 1.2.1), housing near the Downtown (Policies 1.1, 1.3 and Implementation Measure 1.3.1) and along transit corridors (Policies 1.6, 11.6 and Implementation Measures 1.1.1, 1.6.4, 1.8.1, 4.1.6, and 11.6.1). The 1990 Residence Element similarly directs growth to commercial and industrial areas, neighborhood commercial districts, the Downtown and on infill development sites, although to a lesser degree than the 2004 Housing Element. The 2004 Housing Element also advocates for housing in community plan areas and along transit corridors, both of which are policies that were not included in the 1990 Residence Element. Housing in industrial and commercial uses places residents closer to jobs, which reduces fuel needed for transportation. In addition, residential uses require less fuel, water, and energy than industrial and commercial uses, resulting in a decrease in the need for these resources due to a shift in land use. Housing near transit could encourage a mode shift from automobiles to alternative forms of transportation, reducing the City's overall VMT and subsequent fuel use.

The 2004 Housing Element promotes increased building densities more so than the 1990 Residence Element. The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing, which uses less fuel, water, and energy than single-family housing.

A key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. The 2004 Housing Element proposes policies that discourage demolition and promote the maintenance of existing public housing (including Policies 2.1, 3.3, and 3.6) to a degree similar to the 1990 Residence Element. The preservation of existing housing retains the embodied energy within existing buildings and reduces the lifecycle costs associated with demolition and new construction. 2004 Housing Element Policies 2.1, 3.3, and 3.6 are the same as corresponding 1990 Residence Element Policies 3.1, 5.4, and 5.5, respectively. Implementation Measure 3.6.6, which does not have a corresponding 1990 Residence Element Policy, would encourage property owners to use preservation incentives and no environmental impacts are anticipated. Essentially both the 1990 Residence Element and 2004 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

The 2009 Housing Element promotes energy-efficient development (Policy 11.10) to a greater extent than the 1990 Residence Element. The inclusion of energy efficient features (e.g., low flow faucets and effective insulation) and weatherization in housing would reduce the water and energy needs of housing. Therefore, the 2004 Housing Element promotes energy efficient features more strongly than the 1990 Residence Element and could therefore reduce the need for fuel, water, and energy.

Although the 2004 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts of new housing related to the need for fuel, water, and energy would be offset by compliance with the previously discussed regulations, including the Environmental Protection Element of the San Francisco General Plan, SFGBO, San Francisco Residential Energy Conservation Ordinance, and San Francisco Sustainability Plan. Development would also have the opportunity to participate in voluntary programs, such as GoSolarSF and San Francisco's Green Priority Permitting Program. New development could also voluntarily contribute to the goals of the Electricity Resource Plan, which aims to develop new sources of renewable energy, co-generation, and clean distributed generation technologies. The 2004 Housing Element does not contain any policies that would directly or indirectly result in an increased use of fuel, water, or energy. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to the use of large amounts of fuel, water, or energy.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density. These include the following themes: increased density for affordable housing projects; and increased density as a strategy to be pursued through the community planning process.

The 2009 Housing Element does not propose policies that would encourage the use of large amounts of fuel, water, or energy or the use of these resources in a wasteful manner. Furthermore, the following 2009 Housing Element policies could reduce the amount of energy used by residential uses by promoting increased density by directing growth to certain areas of the City and promoting increased density standards, and including energy efficient features in housing. A key strategy for meeting the City's housing goals is to maintain the City's existing housing stock. By discouraging demolition and encouraging the maintenance of the City's existing housing stock, the following 2009 Housing Element policies could reduce the amount of new housing required to meet the City's housing needs and subsequent fuel-, water-, and energy needs associated with demolition and new construction.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Direct growth to certain areas of the City.	Policy 1.1: Focus housing growth- and the infrastructure necessary to support that growth- according to community plans. Complete planning underway in key opportunity areas such as Treasure Island, Candlestick Park and Hunters Point Shipyard.	Implementation Measure 1.1.2: Pursuit of housing development opportunities in neighborhood and area plans.
	Policy 1.3: Work proactively to identify and secure opportunity sites for permanently affordable housing.	Policy 1.1: Promote development of permanently affordable housing on surplus, underused and vacant public lands.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.6: Consider greater flexibility in the number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Policy 2.5: Allow flexibility in the number and size of units within permitted volumes of larger multi-unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 1.7: Consider public health objectives when designating and promoting housing development sites.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 1.8: Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.	Policy 1.3: Create incentives for the inclusion of housing, including permanently affordable housing in commercial developments.
	Policy 4.6: Encourage an equitable distribution of growth according to infrastructure and site capacity.	Policy 12.1: Assure housing is provided with adequate public improvements, services and amenities.
	Policy 10.3: Support state legislation and programs that promote environmentally favorable projects.	
	Policy 12.1: Encourage new housing that relies on transit use and environmentally sustainable patterns of movement.	
	Policy 12.2: Consider the proximity of quality of life elements, such as open space, child care and neighborhood serves, when development new housing units.	
	Policy 13.1: Support "smart" regional growth that locates new housing close to jobs and transit.	
	Policy 13.3: Promote sustainable land use patterns that integrate housing with transportation via transit, pedestrian, and bicycle modes.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 3: Consistent with the SFMTA's Climate Action Plan, MOH shall work with MTA to identify Muni sites that can serve as potential housing sites.	
	Implementation Measure 4: The Mayor's Office of Housing (MOH) shall continue to actively pursue surplus or underused publicly-owned land for housing potential, working with agencies not subject to the Surplus Property Ordinance such as the San Francisco Public Utilities Commission, SFUSD and the Municipal Transportation Agency to identify site opportunities. City agencies shall continue to survey their properties for affordable housing opportunities or joint use potential.	Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [in] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.
	Implementation Measure 6: To further smaller scale TOD opportunities, Planning and MTA shall evaluate smaller surplus MTA-owned sites (typically surface parking lots) and identify barriers towards their redevelopment, such as Planning Code issues, neighborhood parking needs and communities sentiment.	
	Implementation Measure 8: Planning, Redevelopment and Mayor's Office of Economic and Workforce Development (MOEWD) should complete long range planning processes already underway: Japantown, Glen Park, the Northeast Embarcadero Study, the Bayview Hunters Point Plan, Candlestick/ Hunters Pont, India Basin shoreline community planning process, Treasure Island, and Hunters Point.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 14: Planning staff shall prioritize support for projects which are located within a reasonable walking distance of stops along major transit lines, including BART, Muni rail lines and "Muni's 24-hour Rapid Network."	
	Implementation Measure 74: The City shall coordinate with regional entities to complete the necessary planning document for SB 375, including a "Sustainable Community Strategy" which promotes sustainable growth; and corresponding updates to the Housing, Recreation and Open Space, and Land Use Elements of the General Plan.	
	Implementation Measure 80: In development of new community plans, Planning shall include mixed-use design standards for both residential and commercial buildings.	
	Implementation Measure 85: Planning shall ensure community plans for growth are accompanied by capital plans and programs to support both the "hard" and "soft" elements of infrastructure needed by new housing.	Implementation Measure 7.7.1: Acquisition and improvement of open space; facilities and public environmental improvements in six neighborhood strategy areas; street improvements; parking facilities in neighborhoods; transit and street improvements.
	Implementation Measure 90: Planning and SFMTA should coordinate housing development with the ongoing Transit Effectiveness Project.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 94: Regional planning entities such as ABAG shall continue to prioritize regional transportation decisions and funding to "smart" local land use policies that link housing, jobs and other land uses, including focusing on VMT reduction. The City shall encourage formalization of state policy that similarly prioritizes transportation and infrastructure dollars for "smart growth" areas such as San Francisco, rather than geographic allocation.	
	Implementation Measure 97: On a local level, the City shall prioritize planned growth areas such as Better Neighborhoods, other Area Plans or Redevelopment Areas for regional, state, and federal bond and grants, especially for discretionary funding application processes such as the State's Prop 1C.	
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79: Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.
Discourage demolition and	Policy 2.3: Prevent the destruction or reduction of housing for parking.	

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
improve existing housing supply	Policy 2.4: Promote improvements and continued maintenance of existing units to ensure long term habitation and safety.	Objective 5: To maintain and improve the physical condition of housing while maintaining existing affordability levels. Policy 5.1: Assure that existing housing is maintained in decent, safe sanitary conditions at existing affordability levels. Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.1: Preserve rental units, especially rent controlled units, to meet the City's affordable housing needs	Policy 3.1: Discourage the demolition of sound existing housing.
	Policy 3.2: Promote voluntary housing acquisition and rehabilitation to protect affordability for exiting occupants.	Policy 5.2: Promote and support voluntary housing rehabilitation which does not result in the displacement of lower income occupants.
	Policy 3.4: Preserve "naturally affordable" housing types, such as smaller and older ownership units.	
	Policy 3.5: Retain permanently affordable residential hotels and single room occupancy (SRO) units.	Policy 3.7: Preserve the existing stock of residential hotels.
	Policy 9.3: Maintain and improve the condition of the existing supply of public housing, through programs such as HOPE SF.	Policy 5.4: Maintain and improve the existing supply of public housing. Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.
Promote energy efficient housing development.	Policy 12.3: Ensure new housing is sustainably supported by the City's infrastructure systems.	
	Policy 13.4: Promote the highest feasible level of "green" development in both private and municipally-supported housing.	Policy 7.5: Encourage energy efficiency in new residential development and weatherization in existing housing to reduce overall housing costs.

As shown above, the 2009 Housing Element promotes housing through community planning processes (Policies 1.1, 1.6, and Implementation Measures 8, 80 and 97), near transit and other infrastructure

(Policies 1.8, 4.6, 10.3, 12.1, 13.1 and Implementation Measures 6, 14, 74, 90, and 94), and in proximity to neighborhood services (Policies 1.7, 12.2, 13.1 and Implementation Measure 85). The 2009 Housing Element also promotes housing on underused, vacant and surplus lands (Policy 1.3 and Implementation Measures 3 and 4), and housing within mixed-use areas (Policy 1.8 and Implementation Measure 80), thereby directing housing to commercial areas. As discussed previously, directing new housing to certain areas of the City could reduce the City's overall VMT and subsequent fuel use by placing residents closer to jobs and transit. In addition, residential uses require less fuel, water, and energy than industrial and commercial uses, resulting in a decrease in the need for these resources due to a shift in land use.

The 2009 Housing Element also promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). Overall, the 2009 Housing Element does not promote increased density more so than the 1990 Residence Element. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, which could be partially achieved by the construction of multi-family housing, which uses less fuel, water, and energy than single-family housing.

The 2009 Housing Element promotes energy-efficient development (Policies 12.3 and 13.4) to a greater extent than the 1990 Residence Element. The inclusion of energy efficient features (e.g., low flow faucets and effective insulation) and weatherization in housing would reduce the water and energy needs of housing. Therefore, the 2009 Housing Element promotes energy efficient features more strongly than the 1990 Residence Element and could therefore reduce the need for fuel, water, and energy.

Although the 2009 Housing Element would not result in the construction of residential units, it would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Potential impacts of new housing related to the need for fuel, water, and energy would be offset by compliance with the previously discussed regulations. Development would also have the opportunity to participate in voluntary programs, such as GoSolarSF and San Francisco's Green Priority Permitting Program. New development could also voluntarily contribute to the goals of the Electricity Resource Plan, which aims to develop new sources of renewable energy, co-generation, and clean distributed generation technologies. The 2009 Housing Element does not contain any policies that would directly or indirectly result in an increased use of fuel, water, or energy. Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to the use of large amounts of fuel, water, or energy.

Cumulative Impacts

The geographic context for cumulative mineral and energy impacts is the San Francisco Bay Area. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the project area or immediately adjacent to its project boundaries resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to minerals and energy resources. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing Elements. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans that are intended to reduce impacts to mineral and energy resources. The 2004 Housing Element and 2009 Housing Element policies would not directly affect mineral and energy resources. New development could affect such resources, but would be evaluated on a project-by-project basis. In addition, the 2004 Housing Element and 2009 Housing Element are public policy documents and would not result in direct significant impacts.

The City is not a designated area of significant mineral deposits and no area within the City is designated as a locally-important mineral resource recovery site. For this reason, there would be ***no cumulative impact*** related to the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site.

Large amounts of energy, fuel, and water could be used if new projects consist of energy inefficient features, construction equipment is energy inefficient, new residential uses are not located near existing alternative transportation infrastructure, or if demolition and new construction results in increased lifecycle energy costs. However, it is assumed that future development would be consistent with the Environmental Protection Element of the San Francisco General Plan, San Francisco Residential Energy Conservation Ordinance, and San Francisco Sustainability Plan. In addition, new development would be required to comply with the SFGBO, which requires energy efficiency that is approximately 14 to 15 percent more efficient than Title 24 (2005). For this reason, cumulative impacts on the use of large amounts of energy, fuel, and water would be ***less than significant***. The Housing Elements would not contribute to such cumulative impacts because ultimately the Housing Elements promote the maintenance of existing housing, placement of housing near alternative transportation, and use of energy efficient features in new housing construction. Therefore, cumulative impacts would be ***less than significant***.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

V. ENVIRONMENTAL SETTING AND IMPACTS
S. AGRICULTURAL AND FOREST RESOURCES

INTRODUCTION

This section addresses the potential impacts of the 2004 Housing Element and 2009 Housing Element policies related to conversion of Farmland, zoning for agricultural use, zoning of forest land, loss or conversion of forest land, and changes to the existing environment that result in conversion of Farmland to non-agricultural use.

ENVIRONMENTAL SETTING

Agricultural Resources

Farmland Mapping and Monitoring Program (FMMP)

The California Department of Conservation's (DOC) FMMP was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the Natural Resources Conservation Service (NRCS), a division of the United States Department of Agriculture.[1] The intent of the NRCS was to produce agricultural resource maps based on soil quality and land use across the nation. As part of this nationwide mapping effort, NRCS developed a series of definitions known as the Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land's suitability for agricultural production, which included physical and chemical characteristics of soils, as well as specified land use characteristics. Important Farmland Maps are derived from NRCS soil survey maps using LIM criteria. The FMMP map identifies eight classifications of land capability, which are described below.[2]

- **Prime Farmland** is farmland with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce continued high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.

- **Farmland of Statewide Importance** is farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.

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[1] California Department of Conservation (DOC), Division of Land Resource Protection, A Guide to the Farmland Mapping and Monitoring Program, 2004 edition, website: http://www.conservation.ca.gov/dlrp/fmmp/pubs/Documents/fmmp_guide_2004.pdf , February 11, 2009.

[2] DOC, Division of Land Resource Protection, Soil Criteria and Mapping Categories excerpted from the FMMP Guidelines, website: http://www.consrv.ca.gov/dlrp/fmmp/pubs/Documents/soil_criteria.pdf , accessed February 17, 2009.

- **Unique Farmland** is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climactic zones in California. The land must have been cropped at some time during the two update cycles prior to the mapping date.

- **Farmland of Local Importance** is land deemed to be important to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

- **Grazing Land** is land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension Service, and other groups interested in knowing the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- **Urban and Built-Up Land** is land occupied by structures with a building density of at least one unit to one and one-half acres, or approximately six structures to a ten-acre parcel.

- **Other Land** is land which does not meet the criteria of any other category.

The City is highly developed with urban uses and is therefore not agricultural in nature. The entire City is identified as Urban and Built-Up Land by the DOC and does not contain any important farmland.[3] However, the City does include community gardens, which are discussed below.

Agricultural Resources

Table V.S-1 shows the 2008 San Francisco Crop Report. The gross value for crops produced in the City in 2008 was approximately $1,134,000. Orchid products generated the highest gross value, while cut flowers generated the lowest. Overall, miscellaneous farm products generated a higher gross value than nursery products.

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[3] DOC, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, Important Farmland in California, 2004, website: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp2004_11_17.pdf, accessed February 17, 2009.

Table V.S-1
San Francisco Crop Report

	Area (sf)	**Gross Value**
Nursery Products		
Orchids	25,500	$474,000.00
Cuttings	45,000	$10,000.00
Subtotal	70,500	$484,000.00
Miscellaneous Farm Products		
Bean Sprouts	5,500	$182,000.00
Soybean Sprouts	5,500	$108,000.00
Alfalfa Sprouts	3,000	$360,000.00
Subtotal	14,000	$650,000.00
Total	2.0 acres	$1,134,000.00

Source: San Francisco Department of Public Health, Agriculture Program, 2008 San Francisco Crop Report, website: http://www.sfdph.org/dph/files/EHSdocs/ehsAgriculturedocs/2008CropReport.pdf, accessed November 4, 2009.

Community Gardens

The San Francisco Recreation and Park Department (SFRPD) supports and manages a program of 40 community gardens on City-owned property. Community gardens are allowed on SFRPD lands zoned Public Use (P) District and allowed in all Residential (R) Districts. Table V.S-2 lists the community gardens in the City, which are located on public and private property. Figure V.K-1 in Section V.K (Recreation) displays the locations of the City's community gardens.

Table V.S-2
San Francisco Community Gardens

Site	**Location**	**Agency**	**Plots**
Bayview – Hunters Point			
Adam Rogers Park	Ingalls/Oakdale	SFRPD	38
Candlestick Point	Carroll Avenue, near Fitch Street	CSP	NA
Double Rock	Griffith and Fitzgerald	AGHD	NA
Bernal Heights			
Alemany RMC Garden	Ellsworth Street, north of Alemany Street	SFHA	NA
Bernal Heights	Bernal Heights, between Gates/Banks	SFRPD	12
Dogpatch/Miller Memorial	Brewster/Rutledge	SFRPD	18
Good Prospect	Prospect/Courtland	DPW	10
Ogden Terraces	Ogden, between Prentiss/Nevada	DPW	28
Park Street	Park/San Jose	DPW	16
St. Mary's Farm	Alemany/Ellsworth (in St. Mary's Park, next to Housing Authority)	SFRPD	NA
Wolfe Lane	Rutledge/Mullen	DPW	10
Corona Heights			

Table V.S-2
San Francisco Community Gardens

Site	Location	Agency	Plots
Corona Heights	States/Museum	SFRPD	18
Diamond Heights			
Crags Court	Crags/Berkeley	SFRPD	11
Eureka Valley			
Corwin Street	Corwin/Douglass	SFRPD	NA
Excelsior			
Crocker Amazon	Moscow/Geneva	SFRPD	NA
La Grande Mini Park	Dublin/Russia	SFRPD	37
Glen Park			
Arlington	Arlington/Highland	DPW	20
Hayes Valley			
Koshland Park Community Learning Garden	Page/Buchanan	SFRPD	56
Page Street	438 Page Street	SFRPD	45
Page/Laguna Mini Park	Page/Laguna	SFRPD	11
Marina			
Fort Mason Community Garden*	Laguna Street, near Youth Hostel	GGNRA	NA
Mission			
Alioto Mini Park	20th/Capp	SFRPD	18
All in Common	23rd Street, between Folsom Street and Shotwell Street	Private	NA
Dearborn	Between 17th and 18th Streets and Valencia and Guerrero Streets	Unknown	NA
KidPower Park	45 Hoff Street	SFRPD	16
Potrero del Sol	Cesar Chavez/Potrero (eastside)	SFRPD	70-80
Treat Commons at Parque Ninos Unidos	23rd/Treat	SFRPD	14
Nob Hill			
Hooker Alley	Mason, between Pine/Bush	DPW	11
Noe Valley			
Clipper (Street)	Clipper/Grandview	SFRPD	30
North Beach			
Michelangelo Playground	Greenwich/Jones	SFRPD	20
Outer Mission			
Brooks Park	Shields/Ramsell	SFRPD	70
Lessing/Sears Mini Park	Lessing/Sears	SFRPD	5
Potrero Hill			
25th & DeHaro	25th/DeHaro Street	Private	NA
Arkansas Friendship	22nd/Arkansas	DPW	14
Connecticut Friendship	22nd/Connecticut	DPW	29
Potrero Hill (at McKinley Square)	20th/San Bruno Ave	SFRPD	47
Richmond			
Argonne	Between 15th and 16th Avenue and Fulton Street and Cabrillo Street	SFUSD	NA
Golden Gate Senior Center	6101 Fulton Street	SFRPD	NA
SoMa			
Howard/Langton Mini Park	Howard/Langton	SFRPD	40
Howard Street	Howard Street, west of 12th Street	Tenderloin Neighborhood Commission	NA

Table V.S-2
San Francisco Community Gardens

Site	Location	Agency	Plots
Mission Creek	300 Channel Street, near houseboats	SF Port Authority	NA
Victoria Manalo Draves	Folsom/Sherman	SFRPD	21
Sunset			
Sunset	37th Avenue and Pacheco Street	SFUSD	NA
White Crane Springs	South of 7th/Lawton	DPW/SFPUC	25
Telegraph Hill			
Telegraph Hill Neighborhood	660 Lombard Street, between Powell Street and Mason Street	Unknown	NA
Tenderloin			
Central YMCA Rooftop	220 Golden Gate Avenue, between Leavenworth Street & Hyde Street	Private	NA
Upper Market			
Noe/Beaver Mini Park	Noe/Beaver	SFRPD	12
Visitacion Valley			
McLaren Park	Leland/Hahn	SFRPD	60
Visitacion Valley Greenway	Arleta, between Rutland/Alpha	SFPUC	41
Western Addition			
New Liberation	Divisadero Street and Eddy Street	Private	NA

AGHD = Alice Griffith Housing Development
CSP = California State Parks
DPW = Department of Public Works
GGNRA = Golden Gate National Recreation Association
NA = Not Available
SFHA = San Francisco Housing Authority
SFUSD = San Francisco Unified School District

Source:
Information about community gardens managed by SFRPD and DPW was obtained from Marvin Yee, Landscape Architect, San Francisco Recreation and Park Department, email correspondence, November 16, 2009.
All other information was obtained from San Francisco Garden Resource Organization, website: http://www.sfgro.org/, Accessed December 3, 2009.

Forest Land

California is composed of a diverse landscape of over 100 million acres.[4] Thirty-three million acres are characterized as forests, over which there is a broad range of forest types and species. The area of forests in California is split roughly evenly between private and public ownership; 45 percent is private, 52 percent is federal, and three percent is state or local government. The three major agents affecting California's forest are wildfire, insects and disease, and human development/use.

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[4] California Board of Forestry and Fire Protection, Report to ARB on Meeting AB 32 Targets, Draft August 20, 2008, Available at: http://www.fire.ca.gov/cdfbofdb/PDFS/AB32Report_09408.pdf, December 10, 2009.

There are approximately 700,000 trees in the City, 110,000 of which are street trees.[5] Trees are an important resource to the people of San Francisco and to the varied wildlife species that use the urban forests within the City. The tree species that are present throughout the City's Natural Areas, discussed further in Section V.N (Biological Resources), are almost entirely nonnative. No forest land is identified within the City of San Francisco.

REGULATORY SETTING

Federal

No federal regulations related to agricultural and forest resources are applicable to the proposed Housing Elements.

State

Land Conservation Act of 1965 (the Williamson Act)

The California Land Conservation Act of 1965 (or Williamson Act) (California Government Code Section 51200) recognizes the importance of agricultural land as an economic resource that is vital to the general welfare of society. The enacting legislation declares that the preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the State's economic resources, and is necessary not only to the maintenance of the agricultural economy of the State, but also for the assurance of adequate, healthful, and nutritious food for future residents of the State and the nation. Intended to assist the long-term preservation of prime agricultural land in the State, Williamson Act contracts provide the agricultural landowner with a substantial property tax break for keeping land in agricultural use. When under contract, the landowner no longer pays property tax for an assessed valuation based upon the property's urban development potential. The Williamson Act stipulates that for properties under contract, "the highest and best use of such land during the life of the contract is for agricultural uses." Therefore, property under contract is assessed and taxed based upon its agricultural value. Williamson Act contracts remain in effect for ten years unless the property owner files for a notice of non-renewal with the County. To be eligible for Williamson Act designation, land must be used to produce an agricultural commodity that is plant or animal and is produced in California for commercial purposes. The City does not participate in the Williamson Act Program and therefore no land within City boundaries is under Williamson Act contract.[6]

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[5] San Francisco Urban Forestry Council, Annual Report, September 2009, Available at: http://www.sfenvironment.org/downloads/library/sfe_urban_forest_annual_report_2009.pdf, December 10, 2009.

[6] DOC, Division of Land Resource Protection, California Williamson Act, 2006, Williamson Act GIS Data current to Fiscal Year 2006-2007, website:

Forest Land and Timberland

The state Public Resources Code 12220 defines forest as land that can support ten percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources. These are timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits (California Public Resource Code 12220). The state Public Resource Code 4526 defines timberland as land other than that owned by the federal government and land designated by the California Board of Forestry and Fire Protection as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species are determined by the board on a district basis, after consultation with the district committees and others (California Public Resource 25 Code 4526).

Local

Agriculture Program

The San Francisco Department of Public Health's Agricultural Program protects health and safety by enforcing agricultural laws and regulations.[7] The County Agriculture Commissioner has statutory authority to levy administrative fines for violations of these laws and regulations. Trained agricultural biologists of the agriculture program monitor pest conditions in agricultural and horticultural settings in San Francisco, including wholesale nurseries. Staff inspects plant material shipped to San Francisco through the postal, express and freight systems. Furthermore, staff inspects plant products for export to a wide variety of foreign ports and issues export certificates required by importing countries. This work prevents the introduction of exotic pests harmful to California agriculture. The Agriculture Program also manages the orderly burning of agricultural crop residues to minimize the impact on urban areas, and works with producers to find alternative methods of agricultural waste removal. In addition, the Agriculture Program administers the hazardous material storage inventory and carries out inspections of those facilities related to agricultural operations.

Community Garden Policies

The intent of these policies is to continue equal opportunity for public access to all gardens by providing a uniform framework that will allow for flexibility in the management within each garden. A Community Gardens Policy Committee was formed in January 2005 to develop garden standards and Citywide guiding policies for recommendation. The community garden policies were adopted April 20, 2006 and

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ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Map%20and%20PDF/CALIFORNIA%20WILLIAMSON%20ACT/WA_2006_withurban.pdf , accessed February 17, 2009. (A map with GIS Data current to the current Fiscal Year was not available).

[7] San Francisco Department of Public Health, Agriculture Program, website: http://www.sfdph.org/dph/EH/Agriculture/default.asp, accessed November 4, 2009.

became effective July 1, 2006. The policies address garden elements, organizational structure, City ordinances and municipal codes, and Citywide support and interdepartmental coordination.

San Francisco Planning Code

Planning Code Section 209.5 states that open space in R Districts includes community or neighborhood gardens. Open space used for horticultural or passive recreational purposes which is not publicly owned and is not screened from public view, has no structures other than those necessary and incidental to the open land use, is not served by vehicles other than normal maintenance equipment, and has no retail or wholesale sales on the premises.

IMPACTS

Significance Thresholds

The proposed Housing Elements would normally have a significant effect on the environment if they would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland of Statewide Importance, to non-agricultural use or conversion of forest land to non-forest use.

Impact Evaluation

As discussed previously, the 2004 Housing Element and 2009 Housing Elements would not change the land use objectives and policies in the City's area and redevelopment plans. According to Part I of the 2009 Housing Element (Data and Needs Analysis), the City has available capacity to meet the RHNA. Therefore, the rezoning of land uses is not required. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how and where new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects and accommodating housing through existing community planning processes.

New construction could result in impacts related to the City's agricultural resources if sites currently used for urban farming or community gardens were converted to non-agricultural uses or if a new project is constructed in such a way that it blocks sun to plots currently used for urban farming or community gardens or otherwise physically affects a community garden. However, this would not be a significant impact under CEQA and new development would be required to comply with San Francisco Department of Public Health's Agricultural Program, San Francisco's community garden policies, and the San Francisco Planning Code to minimize impacts related to agricultural resources. Furthermore, implementation of the proposed Housing Elements would not include any changes to the City's zoning or height and bulk districts that would have the potential to block sunlight and result in direct impacts to urban farms or community gardens. As previously stated, the entire City is identified as Urban and Built-Up Land by the DOC and does not contain any important farmland. The City does not participate in the Williamson Act Program and no land within City boundaries is under Williamson Act contract. Therefore, there would be ***no impact*** related to the direct conversion of Farmland to non-agricultural use, conflict with a Williamson Act contract, or the conversion of Farmland to non-agricultural use due to other changes in the existing environment.

Most of the City's urban forests are located within P (Public) districts, owned by the SFRPD and other City departments. These sites would not be at risk from conversion to residential uses. As previously stated, no forest land is identified within the City. Impacts related to the City's urban forests with respect to forest land would not be a significant impact under CEQA. The proposed Housing Elements do not propose any changes to allowable uses pursuant to the Planning Code. Implementation of the proposed Housing Elements could result in impacts related to the loss or conversion of urban forest land if trees in R districts were removed, damaged, or otherwise physically affected by a new project. However, implementation of the proposed Housing Elements would be required to comply with the City's tree ordinance, which protects street trees, significant trees, and landmark trees. Virtually all trees within the public right of way are protected under the City's tree ordinance. Furthermore, implementation of the proposed Housing Elements would not include any changes to the City's zoning or height and bulk districts that would have the potential to result in direct impacts to the urban forest. Therefore, there would be ***no impact*** related to forest land and timberland zoning or the loss or conversion of forest land.

Impact AG-1: The proposed Housing Elements would not conflict with existing zoning for agricultural use. (Less than Significant)

New construction could result in impacts related to existing zoning for agricultural use if new housing would result in projects built to the maximum allowable height and bulk capacity, which could block sun on plots currently used for urban farming or community gardens or otherwise physically affect community gardens. However, this is not a CEQA issue and is discussed for informational purposes only.

New housing could also result in development of lots currently used for community gardens. The proposed Housing Elements include policies that would allow for incremental increases in residential building densities within the same allowable densities. Policies that relate to building densities could encourage developers to build to the maximum height/bulk allowed by the Planning Code.

2004 Housing Element Analysis

The following 2004 Housing Element policies could potentially result in a conflict with existing zoning for agricultural use by promoting increased building densities within the same allowable densities, potentially encouraging developers to build to the maximum height/bulk allowed by the Planning Code. New construction on sites currently used for urban agriculture would also present a conflict.

Impact	2004 Housing Element	Corresponding 1990 Residence Element
Promote increased density-related development standards.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element
	Implementation Measure 1.3.1: Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions. These development bonuses would be conferred only incases where in return the development will provide major public benefits to the community.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.
	Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.	
	Policy 1.7: Encourage and support the construction of quality, new family housing.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element
	Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.	
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2004 Housing Element	Corresponding 1990 Residence Element
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.
	Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.	Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.	
	Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.	

Impact	2004 Housing Element	Corresponding 1990 Residence Element
	Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.	
	Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.	
	Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.

As shown above, the 2004 Housing Element promotes increased building densities more so than the 1990 Residence Element. The 2004 Housing Element promotes increased density in certain areas of the City (Policy 1.1 and Implementation Measure 1.1.1, 1.8.1 and 11.6.1) and promotes density bonuses (Policy 4.4 and Implementation Measures 1.3.1 and 4.4.1) and the elimination of density requirements (Policy 1.6 and Implementation Measures 1.6.2 and 1.7.1). The 2004 Housing Element also encourages increased density by promoting reduced parking requirements (Policies 4.4, 11.7, 11.9 and Implementation Measures 1.1.1, 1.6.2, 4.4.1, 11.7.1), support for secondary units (Policy 1.8 and Implementation Measures 1.8.1 and 1.8.3) and flexible building envelopes (Policies 4.5 and 11.6). Increased density standards could result in more units within a given building envelope, thereby resulting in taller buildings. Density bonuses and elimination of density requirements altogether could result in larger building masses as well, also resulting in bigger buildings. Taller buildings could affect the amount of sunlight on a neighborhood community garden, should one exist. Measures that encourage development of increased density could result in the shading of adjacent community gardens or the shift of uses on vacant sites to residential precluding future urban agriculture or community gardens. Although increased density standards may only incrementally increase the average height of buildings within their maximum allowable height/bulk, when combined with policies that also direct growth to certain areas of the City (as discussed above), the 2004 Housing Element policies could incrementally increase average building heights and masses. However, implementation of the 2004 Housing Element would not include any changes to the City's zoning or height and bulk districts. As such, the 2004 Housing Element would not conflict with existing zoning for urban agricultural uses. Therefore, the 2004 Housing Element would have a ***less than significant*** impact with respect to conflict with existing zoning for agricultural use.

2009 Housing Element Analysis

In general, the 2009 Housing Element includes policies that direct growth primarily through community planning processes, but also includes policies that direct housing to commercial areas and sites that are near transit. Overall, the 1990 Residence Element promotes increased density within the same allowable densities on a broader, citywide, scale to a greater extent than the 2009 Housing Element. However, there are two areas under which the 2009 Housing Element promotes greater density than the 1990 Residence Element. These include the following themes: increased density for affordable housing projects and increased density as a strategy to be pursued through the community planning process.

The following 2009 Housing Element policies could potentially result in a conflict with existing zoning for agricultural use by promoting increased density standards, thereby incrementally increasing average building height/bulk. New construction on sites currently used for urban agriculture would also present a conflict.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
Promote increased density-related development standards	Policy 1.4: Ensure changes to land use controls are proposed through neighborhood-supported community planning processes.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.
	Policy 1.5: Consider secondary units in community plans where there is neighborhood support and when other neighborhood goals can be achieved, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Policy 1.6: Consider greater flexibility in number and size of units within established building envelopes in community plan areas, especially if it can increase the number of affordable units in multi-family structures.	Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Policy 7.5: Encourage the production of affordable housing through process and zoning accommodations, and prioritize affordable housing in the review and approval processes.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.
	Policy 11.4: Maintain allowable densities in established residential areas at levels which promote compatibility with prevailing neighborhood character.	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character.
	Implementation Measure 12: Planning shall require integration of new technologies that reduce the space required for non-housing functions, such as parking, and shall consider requiring parking lifts to be supplied in all new housing developments seeking approval for parking at a ratio of 1:1 or above.	
	Implementation Measure 13: When considering legalization of secondary units within community planning processes, Planning shall develop a Design Manual that illustrates how secondary units can be developed to be sensitive to the surrounding neighborhood, to ensure neighborhood character is maintained.	
	Implementation Measure 36: Planning shall continue to implement Planning Code Section 209, which allows a density bonus of twice the number of dwelling units otherwise permitted as a principal use in the district, when the housing is specifically designed for and occupied by senior citizens, physically or mentally disabled persons.	Policy 7.3: Grant density bonuses for construction of affordable or senior housing.

Impact	2009 Housing Element	Corresponding 1990 Residence Element Policy
	Strategy for further review: MOH and Planning should continue to consider, within the context of a community planning process, zoning categories which require a higher proportion of affordable housing where increased density or other benefits are granted. Options include Affordable Housing Only Zones (SLI); Affordable Housing Priority Zones (UMU) or Special Use District Opportunities.	
	Implementation Measure 64: Planning staff shall support affordable housing projects in the development review process, including allowing sponsors of permanently affordable housing to take advantage of allowable densities provided their projects are consistent with neighborhood character.	
	Implementation Measure 79: Planning staff shall continue to use community planning processes to develop policies, zoning and standards that are tailored to neighborhood character.	Implementation Measure 2.2.1: Densities compatible with neighborhood character.

The 2009 Housing Element also promotes increased density through community planning processes (Policies 1.4, 1.5, 1.6, and Implementation Measures 13 and 79) and for affordable housing (Policy 7.5 and Implementation Measures 36 and 64). The 2009 Housing Element also includes a strategy designed to reduce the amount of space required for non-housing functions (Implementation Measure 12). Overall, the 2009 Housing Element does not promote increased density more so than the 1990 Residence Element. However, as discussed in the analysis of the 2004 Housing Element, increased density standards could result in more units within a given building envelope, thereby resulting in taller buildings. Taller buildings could affect the amount of sunlight on a neighborhood community garden, should one exist. Measures that encourage development of increased density could result in the shading of adjacent community gardens or the shift of uses on vacant sites to residential precluding future urban agriculture or community gardens. Although increased density standards may only incrementally increase the average height of buildings within their maximum allowable height/bulk, when combined with policies that also direct growth to certain areas of the City (as discussed above), the 2009 Housing Element policies could incrementally increase average building heights and masses. However, implementation of the 2009 Housing Element would not include any changes to the City's zoning or height and bulk districts. As such, the 2009 Housing Element would not conflict with existing zoning for urban agricultural uses.

Therefore, the 2009 Housing Element would have a ***less than significant*** impact with respect to conflict with existing zoning for agricultural use.

Cumulative Impacts

The geographic context for cumulative agricultural and forest resources impacts is the entire City of San Francisco. Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. This would include the demolition of existing structures or new construction in the project area or immediately adjacent to its project boundaries resulting from past, present and reasonably foreseeable future projects combining with similar impacts from the 2004 Housing Element and 2009 Housing Element. The cumulative effect of development within the City could contribute to impacts related to agricultural resources. As discussed throughout this Draft EIR, growth would occur regardless of implementation of the proposed Housing Elements. Furthermore, any new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the San Francisco General Plan, governing area plans, design guidelines, zoning codes (including development standards), and other applicable land use plans. The 2004 Housing Element and 2009 Housing Element policies would not directly affect agricultural or forest resources. New development could affect such resources, but would be evaluated on a project-by-project basis. In addition, the 2004 Housing Element and 2009 Housing Element are public policy documents and would not result in direct significant impacts. The contribution of potential impacts from the proposed Housing Elements to the cumulative agricultural resource impacts would not be cumulatively considerable. Therefore, there would be ***no impact*** with respect to cumulative impacts related to agricultural resources.

MITIGATION AND IMPROVEMENT MEASURES

Mitigation Measures

No mitigation measures are warranted by the proposed Housing Elements.

Improvement Measures

No improvement measures are warranted by the proposed Housing Elements.

VI. OTHER CEQA ISSUES

INTRODUCTION

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the proposed project; (2) significant environmental effects that cannot be avoided if the proposed project is implemented; (3) significant irreversible environmental changes that would result from implementation of the proposed project; (4) effects found not to be significant; (5) growth-inducing impacts of the proposed project; and (6) secondary land use effects, including urban decay.

SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROJECTS

Table II-1 in Section II (Summary) and Sections V.A (Plans and Policies) through V.S (Agricultural and Forest Resources) provide a comprehensive identification of the potential environmental effects of the proposed Housing Elements. As shown, the proposed Housing Elements would not result in any direct significant environmental effects.

SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECTS ARE IMPLEMENTED

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts which cannot be avoided. Specifically, Section 15126.2(b) states:

> *Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.*

Based on the analysis contained in this EIR, the proposed Housing Elements would not result in significant unavoidable environmental impacts.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the Project. Specifically, Section 15126.2(c) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as a highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result*

from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Commitment to Similar Uses

The 2004 and 2009 Housing Elements are part of the City's ongoing planning efforts to meet City's housing needs. ABAG uses population and job growth projections from the State Department of Finance to determine the regional housing needs for the Bay Area and allocates housing to cities and counties within the Bay Area through the RHNA. San Francisco's fair share of the regional housing need for January 1999 through June 2006, the planning period for the 2004 Housing Element, was calculated as 20,372 units, or 2,717 units per year. San Francisco's fair share of the regional housing need for January 2007 through June 2014, the planning period for the 2009 Housing Element, shows a need for 31,193 housing units, or 4,159 units per year.

The proposed Housing Elements would result in a continued commitment of the City in meeting its housing needs for the City's existing and projected population. Although the proposed Housing Elements would commit the City to proposed affordable housing and density policies, the proposed Housing Elements do not represent a change in commitment from previous Housing Element goals of meeting the City's housing and affordable housing needs. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects, housing projects near major transit lines, and accommodating housing through community planning efforts.

In addition, implementation of the proposed Housing Elements would not result in changes to height and bulk districts or to allowable uses under the Planning Code. The proposed Housing Elements would not result in the construction of residential units, but rather would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs. Part I of the 2009 Housing Element (Data Needs Analysis) indicates that the City has available capacity to meet the 2004 and 2009 RHNA, therefore rezoning to accommodate the RHNA is not required. Therefore, while the Housing Elements would commit future generations to similar uses, the uses are consistent with an ongoing planning process designed to meet RHNA obligations. Therefore, the 2004 and 2009 Housing Elements would have a ***less than significant*** impact with respect to the commitment of similar uses.

Commitment of Nonrenewable Resources

The Housing Elements do not directly propose new development and would therefore not result in the commitment of non-renewable resources. The Housing Elements are intended to provide direction for how new residential uses should be developed. Therefore, resources that would be permanently and continually consumed by new residential development include energy (electricity and natural gas), water, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts related to the unnecessary, inefficient, or wasteful use of resources, as described below.

Energy

The 2004 and 2009 Housing Element policies that encourage development of new housing could result in increased housing construction, which could increase the associated activities that generate increased use of nonrenewable resources. Although new development would occur within the City regardless of the 2004 and 2009 Housing Elements, energy use would increase as a result of the development of individual projects that are consistent with the goals of the 2004 and 2009 Housing Elements. However, new buildings in California are required to conform to energy conservation standards specified in Title 24 of the California Code of Regulations (CCR). The standards establish "energy budgets" for different types of residential buildings, with which all new buildings must comply.

Individual projects would also be required to comply with the City's Green Building Ordinance (SFGBO), Chapter 13C of the Environment Code. The ordinance would apply to all residential development within the City. Generally, residential projects would be required to meet a specific level of point under the Green Point Rated System (minimum 75 points).

Compliance with all applicable building codes, as well as other design features that are determined through the project approval process of individual projects, would ensure that natural resources are conserved or recycled to the maximum extent feasible. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, that would further reduce reliance upon nonrenewable natural resources by new housing construction. Even with implementation of conservation measures, consumption of natural resources, including electricity and natural gas, would generally increase with implementation of individual projects. However, the 2004 and 2009 Housing Elements would not result in the construction of residential units and would not directly involve inefficient or unjustifiable use of energy resources. Therefore, the 2004 and 2009 Housing Elements would have a ***less than significant*** impact with respect to the use of non-renewable energy resources.

Water

In terms of potable water, implementation of the proposed Housing Elements could encourage increased density, which could potentially encourage increased housing construction and consumption of potable water. However, the development in the City would occur regardless of the 2004 and 2009 Housing Element. Policies that advocate for increased density would result in lower overall water use because multi-family housing typically use less water than single-family housing. Additionally, per the requirements of the SFGBO, individual projects would be required to incorporate the installation of ultra-low flow fixtures, use of high-efficiency building equipment, efficient landscape irrigation techniques, and provision of water-efficient plant materials.

While potable water use would increase with the development of future housing, individual projects would be subject to various water-conservation measures that are being implemented by the SFPUC. The SFPUC's demand management programs range from financial incentives for plumbing devices to improvements in the distribution efficiency of the system. The conservation programs implemented by the SFPUC are based on the California Urban Water Conservation Council's list of fourteen BMP identified by signatories of the Memorandum of Understanding Regarding Urban Water Conservation in California, executed in 1991.

In addition, the SFPUC is increasing its water-conservation programs in an effort to achieve new water savings by 2018. This program is based on the 2004 San Francisco Retail Water Demands and Conservation Potential Report (Demand Report) that identified potential water savings and implementation costs associated with a number of water conservation measures. These new conservation programs include high-efficiency toilet replacement in low-income communities and water-efficient irrigation systems in municipal parks. With this expanded conservation program, the SFPUC anticipates reducing gross per household consumption (which includes both residents and non-residents) from 91.5 gallons per day (gpd) to 87.4 gpd by 2018, which would result in a conservation supply potential of approximately 4.0 mgd annually.

Currently, the SFPUC is conducting a recycled water demand assessment on the Eastside of San Francisco. The assessment examines the potential uses of recycled water for irrigation, toilet flushing, and commercial applications. The WSIP contains funding for planning, design, and environmental review for the San Francisco Eastside Recycled Water Project.[1] New sources of groundwater, recycled water, and water conservation are essential to provide the City with adequate supply in dry year periods, as well as improving supply reliability during years with normal precipitation.

The proposed Housing Elements would not involve the wasteful, inefficient, or unjustifiable use of water resources. Although new development could potentially increase water use, the Housing Element policies promote land uses that use water more efficiently (i.e. multi-family housing uses less water than single-family housing. Additionally, the proposed Housing Elements would not result in the construction of residential units. Furthermore, all new development would be required to comply with the previously discussed SFGBO and SFPUC regulations. Therefore, the 2004 and 2009 Housing Elements would have a ***less than significant*** impact with respect to the use of water resources.

Fossil Fuels

Although new development could potentially increase impacts related to fossil fuels, the Housing Element policies, in themselves, would not result in the construction of residential units and the related consumption of fossil fuels through residential construction and operational phases. Construction and operational activities related to individual residential development projects would result in the irretrievable commitment of fossil fuels for automobile use and construction equipment. The use of fuels resulting from travel to and from project sites would be higher than under existing conditions, which would result in a large increase in consumption of fossil fuels. However, projects would be evaluated on an individual basis to ensure that consumption would not be wasteful through the implementation of transit, bicycle, and pedestrian features and the implementation of transportation demand management programs designed to reduce vehicle trips.

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[1] Final Water Supply Availability Study for City and County of San Francisco prepared by PBS&J, October 2009, pg 11. (See Appendix H)

Furthermore, the 2004 and 2009 Housing Elements would promote denser development housing near transit, jobs, and services within an urbanized area, which would reduce the total number of trips to and from individual project sites, as well as overall trip lengths. For example, the 2004 Housing Element focuses development in underutilized commercial and industrial areas and promotes increased development in neighborhood commercial districts and mixed-use districts. The 2004 Housing Element proposes policies that encourage locating housing near downtown areas and areas that are well served by amenities and transit (including Policies 1.3, 11.2, and 11.6) to a degree similar to the 1990 Residence Element. In addition, 2004 Housing Element Implementation Measures 1.1.1, 1.2.2, 1.8.1, 4.1.6, and 11.6.1, which encourage housing to be located in areas with existing amenities or access to transit to a greater degree than the 1990 Residence Element. The 2004 Housing Element encourages residential uses near transit-rich areas and could redirect housing growth to areas of the City with a higher percentage of trips occurring by alternative transportation modes. By encouraging future development within transit-rich areas, overall vehicle miles traveled (VMT) could be reduced. Similarly, the 2009 Housing Element focuses residential growth through community planning efforts, which are located near major transit. Furthermore, these areas are planned for increased transit service. For example, 2009 Housing Element Policies 1.5, 12.1, and 13.1 would encourage housing near transit lines and existing transit infrastructure to a greater extent than corresponding 1990 Residence Element policies. As discussed below, the 2004 and 2009 Housing Element contains policies intended to reduce overall Citywide VMT. The introduction of residential development in these areas would place housing in proximity to transit opportunities and jobs, which could reduce overall VMT. Therefore, the 2004 and 2009 Housing Elements would not be wasteful with respect to petroleum fuel consumption and would have a ***less than significant*** impact with respect to the use of fossil fuels.

EFFECTS NOT FOUND TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines requires that an EIR "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR." All CEQA issues are reviewed in this EIR.

IRREVERSIBLE DAMAGE

Irreversible damage results from environmental accidents and upsets associated with the use, transport, or storage of hazardous materials during construction or operational activities. Section V.Q (Hazards and Hazardous Materials) fully discloses and evaluates all potential impacts associated with the use, transport, or storage of hazardous materials during construction or operational activities involving hazardous materials.

Residential uses typically do not generate hazardous materials and household hazardous materials are typically labeled to ensure proper use. The types of potentially hazardous materials associated with residential units include solvents, paint, batteries, fertilizers, and petroleum products that are packaged and stored for consumer sales. The household transport and storage of these materials would not pose a significant hazard to the public or the environment because household hazardous materials can be disposed of in three ways: 1) home collection service; 2) neighborhood drop-off sites; and 3) household hazardous waste drop-off facilities. Moreover, the San Francisco Department of the Environment conducts education and outreach for proper disposal of household toxics such as through the Toxics Reduction program. The City offers free disposal of many toxic household items.

Moreover, the 2004 and 2009 Housing Elements would not in themselves result in the construction of residential units. Furthermore, all new development would be required to comply with all applicable regulations related to hazards and hazardous materials. Therefore, the 2004 and 2009 Housing Elements would have ***no significant irreversible effects*** that would occur as a result of construction or operational activities involving hazardous materials.

DIRECT OR INDIRECT ECONOMIC OR POPULATION GROWTH

Section 15126.2(d) of the CEQA Guidelines requires a discussion of the ways in which a project could induce growth. This includes ways in which a project would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Section 15126.2(d) of the CEQA Guidelines states:

> *Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

This EIR evaluates the environmental impacts of adoption of the 2004 Housing Element and the proposed 2009 Housing Element. The Housing Element is a public policy document that comprehensively addresses issues relating to housing needs for San Francisco residents and households. The Housing Element is prepared in response to California's housing element law, Government Code sections 65580 et seq., which, since 1969, has required local jurisdictions to adequately plan for and address the housing needs of all segments of its population, such that all communities contribute to the attainment of the state housing goals. As noted above, based on RHNA as determined by ABAG, San Francisco's fair share of the regional housing need for January 2007 through June 2014, the planning period for the 2009 Housing Element, shows a need for 31,193 housing units, or 4,159 units per year.

To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects, housing near jobs, transportation, and other infrastructure, and accommodating housing through community planning efforts.

Implementation of the proposed Housing Elements would help achieve the RHNA goals by aiming to provide housing for the existing and projected residents of the City (Policy 1.1, 1.2). The proposed Housing Elements seek to accomplish this by proposing policies that make sites available for housing, increasing residential density in order to increase the amount of housing on each site, and preserving existing housing and removing barriers to development. Implementation of the proposed Housing Elements would not result in changes to height and bulk districts or to allowable uses under the Planning Code and would therefore not have the potential to result in the intensification of residential uses beyond what is already allowed. However, there is a tradeoff consideration that in some areas, such as RH-1 and RH-2, density limits should be maintained to protect neighborhood character. Furthermore, new development would be required to comply with Section 1302(c)(2) of the San Francisco Subdivision Code, San Francisco Planning Code Section 317, and the Residential Hotel Unit Conversion and Demolition Ordinance to minimize impacts related to population growth. In developing the proposed Housing Elements, the City demonstrated that there are substantial infill housing opportunity sites to meet the City's share of the RHNA. Therefore, rezoning to accommodate the RHNA is not required. Moreover, residential development in the City would occur regardless of the proposed Housing Elements. The objectives, policies, and implementation measures in the proposed Housing Elements would provide direction for that growth.

Policies provide incentives to development to meet the RHNA. For example, planning should examine incentives such as density bonuses, or other zoning related mechanisms that encourage long-term (i.e. deed-restricted) permanently affordable rental housing. Also, state and regional infrastructure funding should be directly linked to the RHNA, and award plans for infill growth, rather than awarding vehicular capacity throughout the region. Therefore, implementation of the proposed Housing Elements would not directly induce growth.

As new housing is developed, significant impacts could result if population growth exceeds infrastructure capacity. For the purposes of this analysis, "infrastructure" is comprised of roads and utility systems, including water, sewer, stormwater, solid waste, and electrical distribution, processing, or storage systems. However, as described above, the Housing Elements themselves do not promote growth or indirectly encourage substantial new growth in the City that has not previously been projected by RHNA forecasts. Therefore, the 2004 and 2009 Housing Elements would have a ***less than significant*** impact with respect to direct or indirect economic or population growth.

URBAN DECAY

Economic and social changes resulting from a project can cause secondary environmental effects. Economic and social changes are not in themselves significant impacts on the environment; however, a physical change in the environment caused by economic and social factors attributable to a development could sometimes result in a reasonably foreseeable indirect environmental impact, such as urban decay or deterioration. Urban decay results from land use decisions that cause a chain reaction of store closures and long-term commercial vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake. Urban decay can be defined as, among other characteristics, multiple visible symptoms of physical deterioration that invite vandalism, loitering, and graffiti that is caused by a downward spiral of business closures and long-term vacancies. The physical deterioration to properties or structures is so prevalent, substantial, and lasting for a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community. The manifestations of urban decay include such visible conditions as plywood-boarded doors and windows, parked trucks and long-term unauthorized use of the properties and parking lots, extensive tagging, graffiti, and offensive words painted on buildings, dumping of refuse on site, overturned dumpsters, broken parking barriers, broken glass littering the site, dead trees and shrubbery along with weeds, lack of building maintenance, homeless encampments, and unsightly and dilapidated fencing.

As noted above, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects, directs housing near transit, and accommodating housing through community planning efforts. Therefore, the Housing Elements would not contribute to urban decay, but rather plan to accommodate housing needs in a focused manner, with an emphasis on developing in underutilized areas and the creation of mixed use districts and developments near major transit lines. In addition, the introduction of residential uses in single-use areas could increase the nighttime population of these areas, which could decrease vandalism, loitering, and graffiti. These measures would serve to foster neighborhood businesses by creating a local economic base through nearby housing. Moreover, the proposed Housing Elements seek to meet the City's housing needs and therefore would not be contributing to vacancy rates that are a factor in urban decay.

Both the proposed Housing Elements and the 1990 Residence Element support the preservation of existing housing through improvements and upgrades. Specifically, 2004 Housing Element Policies 2.4, 3.1, 3.2, 3.3, and 3.4 promote improvements to the physical conditions of existing housing, which would serve to minimize urban decay resulting from dilapidated or unmaintained housing. Similarly, 2009 Housing Element Policies 8.1 and 9.3 support the production, management, and preservation of affordable units. These policies promote the preservation of affordable housing, which could counter urban decay pressures.

Furthermore , 2004 Housing Element Policies 10.1, 10.2, 10.3, and 11.1 could reduce blight by using new housing development as a means to enhance neighborhood vitality and serve to meet the housing and social needs of the homeless population, which can be a factor in urban decay. Similarly, 2009 Housing Element Policies 6.1 and 6.2 serve to meet the housing needs of the homeless population, which can reduce blight. Therefore, the 2004 and 2009 Housing Elements would have a ***less than significant*** impact with respect to urban decay.

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VII. ALTERNATIVES

INTRODUCTION

Legislative Framework

In accordance with CEQA Guidelines Section 15126.6, EIRs are required to include a discussion of alternatives to a proposed project. Section 15126.6(a) states that an EIR should describe a range of reasonable alternatives to a project that would attain most of the basic objectives of a project while reducing one or more of the significant impacts of the project, and should evaluate the comparative merits of those alternatives.

Public Resources Code Section 21002 states, in pertinent part:

> *In determining the nature and scope of alternatives to be examined in an EIR, the Legislature has decreed that local agencies shall be guided by the doctrine of "feasibility." It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. In the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.*

California has declared that the statutory requirements for consideration of alternatives must be judged against a rule of reason. CEQA Guidelines Section 15126.6(f) defines the "Rule of Reason," which requires that an EIR set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to those that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the project. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR is (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to offer substantial environmental advantages over the project proposal (CEQA Guidelines Section 15126.6(c)).

CEQA Guidelines Section 15126.6(e)(1) requires an analysis of the No Project Alternative. The purpose of describing and analyzing the No Project Alternative is to allow decision-makers to compare the impacts of approving a project with the impacts of not approving a project. CEQA Guidelines Section 15126.6(e)(3)(A) provides that "when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future." The No Project Alternative in this section discusses future conditions if the proposed 2004 Housing Element and 2009 Housing Element policies would not replace the 1990 Residence Element policies.

CEQA Guidelines Section 15126.6(f)(1) states that "the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)."

Analytic Method

This section describes the alternatives and identifies potential environmental impacts associated with implementation of the alternatives relative to the impacts of the proposed Housing Elements. To identify reasonable alternatives to the proposed Housing Elements, the Lead Agency (City and County of San Francisco Planning Department) considered the objectives of the proposed Housing Elements, those alternatives that are feasible to accomplish, and those alternatives that could reduce the impacts of the proposed Housing Elements.

The general process for identifying alternatives for consideration in the document included these steps:

1. Review the EIR analysis for any significant effects resulting from the proposed Housing Elements and identify possible strategies to avoid or lessen impacts;

2. Review the California Court of Appeal decision regarding the Negative Declaration prepared for the 2004 Housing Element;

3. Review ideas and alternative concepts suggested during the Notice of Preparation Public Scoping Period or at other points during the 2009 Housing Element and DEIR preparation process; and

4. Select and refine a final set of alternatives for CEQA analysis.

From this process, two alternatives, in addition to the required No Project Alternative, were selected for further evaluation and comparison to the proposed Housing Elements. Together, this set of three alternatives represents a broad range of options in terms of shaping how new residential development should occur.

The 2004 Housing Element and 2009 Housing Element do not include any changes to the land use objectives and policies in the City's area plans or redevelopment plans. However, the proposed Housing Elements promote the use of specific neighborhood and area plans as part of the planning process. Thus, while implementation of the proposed Housing Elements would not directly affect existing area plans or redevelopment plans, it would nonetheless guide future development in plan areas and throughout the City.

ABAG, in coordination with HCD, uses population and job growth projections from the State Department of Finance to determine the regional housing needs for the Bay Area and allocates housing to cities and counties within the Bay Area through the RHNA. Currently, the City is generally meeting ABAG's household projections and is slightly exceeding ABAG's population estimates. Residential development in the City would occur regardless of the proposed Housing Elements. Housing element law was enacted to ensure that localities plan and make land available for new housing. The proposed Housing Elements are policy documents that provide direction for accommodating the need for new housing, at all income levels, driven by population growth. In providing direction for meeting regional housing needs, ABAG focuses on both the amount of housing and the affordability of housing. To meet the City's share of the RHNA, the proposed Housing Elements aim to do the following: 1) preserve and upgrade existing housing units to ensure they do not become dilapidated, abandoned, or unsound, and 2) provide direction for how new housing development in the City should occur. With respect to the latter, the 2004 Housing Element encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed use districts near Downtown. On the other hand, the 2009 Housing Element encourages housing in new commercial or institutional projects, housing projects near major transit lines, and accommodating housing through community planning efforts.

Although the proposed Housing Elements would not directly result in the construction of residential units, they would shape how new residential development should occur and ensures that there is adequate land available to meet future housing needs.

PROJECT OBJECTIVES

As discussed in Section IV (Project Description), the objectives of the proposed Housing Elements are to:

1. Provide a vision for the City's housing and growth management through 2014;
2. Maintain the existing housing stock to serve housing needs;
3. Ensure capacity for the development of new housing to meet the RHNA at all income levels;
4. Encourage housing development where supported by existing or planned infrastructure, while maintaining existing neighborhood character;
5. Encourage, develop and maintain programs and policies to meet projected affordable housing needs;
6. Develop a vision for San Francisco that supports sustainable local, regional and state housing and environmental goals; and
7. Adopt a housing element that substantially complies with California housing element law as determined by the California Department of Housing and Community Development.

SELECTED ALTERNATIVES

Three alternatives to the proposed Housing Elements have been evaluated. The analysis of all three alternatives assumes compliance with housing element law, which requires that the City's Housing Element reflects the current RHNA and an up-to-date Data and Needs analysis. Therefore, under all alternatives, it is assumed that the 2009-2014 RHNA and Part I of the 2009 Housing Element are in effect. The alternatives considered include the following:

- **Alternative A: The No Project/Continuation of 1990 Residence Element Alternative**. CEQA Guidelines Section 15126.6(e)(3)(A) provides that "when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future." Under Alternative A: the No Project/Continuation of 1990 Residence Element Alternative, the 1990 Residence Element policies would remain in effect and neither the proposed 2004 Housing Element nor the 2009 Housing Element policies would be implemented. Housing development in the City would continue as encouraged under the 1990 Residence Element. However, this alternative would assume the adoption of the 2009 Data and Needs Analysis and the updated RHNA allocation. This discussion would allow the decision-makers to compare the impacts of approving either the 2004 and 2009 Housing Elements with the impacts of not approving either of the proposed Housing Elements. For reference, a summary of the Alternative A objectives and policies are included in Appendix B-1 to this EIR.

- **Alternative B: 2004 Housing Element–Adjudicated.** This alternative includes the objectives, policies and implementation measures of the 2004 Housing Element excepting policies that were stricken by the superior court. Similar to Alternative A, this alternative would use the most recently identified RHNA allocation[1] and an updated Data and Needs Analysis. For reference, Alternative B objectives and policies are included in Appendix B-4 to this EIR.

- **Alternative C: 2009 Housing Element–Intensified.** This alternative includes concepts that more actively encourage housing development through zoning accommodations. These concepts were generated based on ideas and alternative concepts raised over the course of outreach for the 2009 Housing Element preparation process, but which were ultimately not included. These concepts are intended to encourage housing by: 1) allowing for limited expansion of allowable building envelope for developments meeting the City's affordable housing requirement on site with units of two or more bedrooms; 2) requiring development to the full allowable building envelope in locations that are directly on Transportation Effectiveness Project (TEP) rapid transit network lines; 3) giving height and/or density bonuses for development that exceeds affordable housing requirements in locations that are directly on TEP rapid transit network lines; 4) allowing height and/or density bonus for 100 percent affordable housing in all areas of the City except in RH-1 and RH-2 zones; and 5) granting of administrative variances (i.e. over the counter) for reduced parking spaces if the development is: a) in an RH-2 zoning district (allowing for greater residential density); b) in an area where additional curb cuts would restrict parking in areas with parking shortages; or c) on a Transit Preferential Street.[2] For reference, Alternative C objectives and policies are included in Appendix B-5 to this EIR.

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[1] See above.

ANALYSIS OF PROJECT ALTERNATIVES

This section provides an analysis of the environmental impacts of each of the alternatives, comparing the potential impacts of the alternatives to the proposed Housing Elements' impacts (if any), and identifies the impacts that would result from implementation of the alternatives themselves. For purposes of comparison, the discussion of impacts for each of the alternatives is identified by both significance level and whether the impact is greater than, similar to, or less than the impact of the proposed Housing Elements, even if the level of significance for the alternative is not different than the proposed Housing Elements.

This alternatives analysis is structured to discuss the impacts of each alternative against the two project components: the 2004 Housing Element and the 2009 Housing Element. Therefore, the analysis will analyze the impacts to each environmental issue area from the specific alternative (i.e., Alternative A, B, or C) to each of the proposed Housing Elements. In order to reduce redundancy, in cases where the impacts of the alternative as compared to the two project components are similar, the analysis is combined.

Table VII-1 presents a generalized summary of the potential environmental impacts from the project alternatives. The policies of Alternative B are shown in ~~strikethrough,~~ in accordance with the Superio Court's determination, and indicate those policies deleted from the 2004 Housing Element. It is noted that the policies listed below for Alternative C are in addition to the objectives, policies, implementation measures and strategies for further review of the 2009 Housing Element.

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[2] Transportation Element, San Francisco General Plan.

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
Direct growth to certain areas of the City		
Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. ~~Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.~~	5. Granting of administrative variances (i.e. over the counter) for reduced parking spaces if the development is: a. In an RH-2 zoning district (allows for greater residential density); b. In an area where additional curb cuts would restrict parking in areas with parking shortages; or c. On a Transit Preferential Street.
	~~Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
	~~Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.~~	
	~~Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.~~	
Policy 1.2: Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.	Policy 1.3: Identify opportunities for housing and mixed-use districts near downtown and former industrial portions of the City.	
Implementation Measure 1.1.3: Inclusion of housing in Downtown.	Implementation Measure 1.3.1: ~~Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions.~~ These development bonuses would be conferred only in cases where in return the development will provide major public benefits to the community.	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	
Policy 1.4: Locate in-fill housing on appropriate sites in established neighborhoods.	Policy 1.4: Locate in-fill housing on appropriate sites in established residential neighborhoods.	
	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	~~Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
	Implementation Measure 1.6.4: The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	2. Requiring development to the full allowable building envelope in locations that are directly on Transportation Effectiveness Project (TEP) rapid transit network lines.
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
Implementation Measure 1.1.1: Aggressive pursuit of development opportunities [on] underused public sites. Implementation Measure 1.1.4: In-fill housing on vacant or underused sites.	Implementation Measure 4.1.4: The City will work to identify underutilized, vacant, and Brownfield sites that are publicly or privately owned and suitable for affordable housing development. The City will work with for profit and non-profit housing developers to acquire these sites for permanently affordable housing.	
	Implementation Measure 4.1.6: Permanently affordable housing sites will be especially sought out in places where transportation and existing amenities are in place.	3. Giving height and/or density bonuses for development that exceeds affordable housing requirements in locations that are directly on TEP rapid transit network lines.
Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.	~~Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.~~	
Promote increased density-related development standards		
	~~Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character. Policy 2.2: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are permanently affordable to lower income households.	Policy 1.1: Encourage higher residential density in areas adjacent to downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. ~~Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.~~	4. Allowing height and/or density bonus for 100 percent affordable housing in all areas of the City except in RH-1 and RH-2 zones.
	~~Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in downtown areas or through a Better Neighborhoods-type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
Implementation Measure 1.1.3: Inclusion of housing in Downtown (allowing housing to exceed permitted Floor-Area-Ratios [FARs] in C-3-G and C-3-S Districts).	Implementation Measure 1.3.1: ~~Downtown areas and areas subject to a Better Neighborhoods-type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions.~~ These development bonuses would be conferred only in cases where in return the development will provide major public benefits to the community.	
Policy 1.3: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	Policy 1.6: Create incentives for the inclusion of housing, particularly permanently affordable housing, in new commercial development projects.	
	~~Implementation Measure 1.6.2: The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be rezoning to include mixed-use residential areas and reduced residential parking requirements.~~	
	~~Policy 1.7: Encourage and support the construction of quality, new family housing.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
	~~Implementation Measure 1.7.1: In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.~~	
Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	
	Implementation Measure 1.8.3: On-going planning will propose Planning Code amendments to encourage secondary units where appropriate.	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
Policy 7.3: Grant density bonuses for construction of affordable or senior housing.	Policy 4.4: Consider granting density bonuses ~~and parking requirement exemptions~~ for the construction of affordable housing or senior housing.	
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	
Policy 2.3: Allow flexibility in the number and size of units within permitted volumes of larger multi unit structures, especially if the flexibility results in creation of a significant number of dwelling units that are permanently affordable to lower income households.	Policy 4.5: Allow greater flexibility in the number and size of units within established building envelopes, potentially increasing the number of affordable units in multi-family structures.	1. Allowing for limited expansion of allowable building envelope for developments meeting the City's affordable housing requirement on site with units of two or more bedrooms.
Policy 12.5 Relate land use controls to the appropriate scale for new and existing residential areas.	~~Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas, and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified
	~~Implementation Measure 11.6.1: The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.~~	
	~~Policy 11.7: Where there is neighborhood support, reduce of remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.~~	
	~~Implementation Measure 11.7.1: The Planning Department will work to reduce parking in older neighborhoods through a Better Neighborhoods type planning process with the support and input from local neighborhoods.~~	
	~~Policy 11.8: Strongly encourage project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.~~	
Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.	~~Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.~~	

Table VII-1
Comparison of Policies with the Potential for Environmental Impacts

Alternative A No Project (1990 Residence Element)	Alternative B 2004 Housing Element-Adjudicated	Alternative C 2009 Housing Element-Intensified

[1] *The intent of this list is to list all policies of Housing Element Alternatives A, B, and C with the potential to have physical impacts on the environment. Any policies not listed here that also may have physical impacts on the environment are likely to have substantially the same impacts as the policies included herein.*

[2] *The Housing Elements contain additional themes beyond what is presented in this table. However, those themes, which include (but are not limited to) Homelessness, Housing Condition, Seismic Safety, and Displacement, do not have associated policies that would result in potential environmental impacts.*

Alternative A: No Project

CEQA Guidelines Section 15126.6(e)(3)(A) provides that "when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future." Under Alternative A: No Project, the 1990 Residence Element policies would remain in effect and the proposed 2004 Housing Element and 2009 Housing Element policies would not be implemented. Housing development in the City would continue as encouraged under the 1990 Residence Element. This discussion will allow the decision-makers to compare the impacts of approving the project with the impacts of not approving the project, while still needing to meet the goals of the most recent RHNA.

The No Project Alternative assumes that the City would comply with state housing element law, which mandates the inclusion of an updated housing element in the City's General Plan. Thus, the No Project Alternative includes the objectives and policies contained in the 1990 Residence Element coupled with the most recently identified RHNA allocation and an updated Data and Needs Analysis.

Land Use

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative A would not include any extensions of roadways or other development features through a currently developed area that could physically divide an established community. Areas for future housing development would occur primarily as infill or on individual parcels as most future housing development would take place in established neighborhoods. With respect to division of a community, Alternative A would be similar to the 2004 Housing Element and 2009 Housing Element by encouraging additional residential growth in established areas within an established land use plan and there would be ***no impact***.

2004 Housing Element Comparison

Similar to the 2004 Housing Element, development under Alternative A would be subject to existing Area Plans and Redevelopment Plans and would serve to complement the policies and land uses in an Area Plan or Redevelopment Plan. Additionally, Alternative A would not conflict with any regional land use policies, the Regional Transportation Plan, or prevailing local plans, including San Francisco Bay Conservation and Development Commission (BCDC) policies, San Francisco planning policies (General Plan, Countywide Transportation Plan, Municipal Transportation Agency [MTA] Strategic Plan, Bicycle Plan, and Urban Forest Plan).

The 2004 Housing Element encourages new housing in Downtown, in underutilized commercial and industrial areas, and increased housing in neighborhood commercial districts and mixed-use districts near Downtown. This encouragement of residential development in some areas of the City that were historically non-residential, might increase potential for conflicts between residential and other land uses. Additionally, Alternative A would not increase density to the same extent as the 2004 Housing Element because the 2004 HE identified particular locations that would provide housing opportunities and did not assume housing opportunities throughout the entire City, thereby reducing the potential for land use conflicts. Therefore, Alternative A could result in incrementally fewer potential land use policy impacts from directing housing to certain areas of the City and not as aggressively promoting density. However, similar to the 2004 Housing Element, overall impacts related to land use would be ***less than significant.***

2009 Housing Element Comparison

Similar to the 2009 Housing Element, development under Alternative A would be subject to existing Area Plans and Redevelopment Plans and would serve to complement the policies and land uses in an Area Plan or Redevelopment Plan. Additionally, Alternative A would not conflict with any regional land use policies, the Regional Transportation Plan, or prevailing local plans, including BCDC policies, San Francisco planning policies (General Plan, Countywide Transportation Plan, MTA Strategic Plan, Bicycle Plan, and Urban Forest Plan).

The 2009 Housing Element encourages housing in all new commercial or institutional projects, near major transit lines, and through community planning efforts. This encouragement for housing development, which could result in some land use conflicts, could occur to a greater extent under Alternative A than under the 2009 Housing Element because alternative A encourages housing in less limited areas. Additionally, Alternative A would increase density to a greater extent Citywide than the 2009 Housing Element, thereby increasing the potential for land use conflicts. Therefore, impacts to land use conflicts could be incrementally greater under Alternative A than the 2009 Housing Element. However, similar to the 2009 Housing Element impacts related to land use would be ***less than significant.***

Aesthetics

2004 Housing Element Comparison

Alternative A promotes increased density to a lesser extent than the 2004 Housing Element. Specifically, Alternative A would promote attainment of the RHNA to a lesser degree than the 2004 Housing Element, and, therefore, Alternative A could result in smaller buildings or fewer new building. If fewer numbers of taller residential buildings, which accommodate higher densities of residential uses, might be constructed, Alternative A would result in incrementally fewer potential impacts to scenic vistas. Both Alternative A and the 2004 Housing Element promote development on surplus vacant lands to a similar degree. Under Alternative A, it is possible that fewer new high density buildings, with more sources of light and larger expanses of glass compared to typical residential uses, would be constructed, resulting in a decrease in light and glare from new residential sources. This impact would be incrementally less than that under the 2004 Housing Element. However, similar to the 2004 Housing Element, impacts related to aesthetics under Alternative A would be ***less than significant.***

2009 Housing Element Comparison

Alternative A promotes increased growth more generally throughout the entire City than the 2009 Housing Element, which promotes increased density only for affordable housing projects and through community planning projects. Therefore, Alternative A could result in more developments built to the maximum building heights, potentially increasing the height of new development that could have the potential to affect a scenic vista. However, Alternative A would promote attainment of the RHNA to a lesser degree than the 2004 Housing Element, and, therefore, Alternative A could result in smaller buildings or fewer new building. Unlike the 2009 Housing Element, Alternative A does not include specific policies to preserve landmark buildings, which could be considered a scenic resource of the built environment. Therefore, impacts to scenic resources could be incrementally greater under Alternative A than under the 2009 Housing Element. Alternative A includes guidelines for development that are intended to preserve neighborhood character and that would protect existing visual character. Under Alternative A, new housing units might be constructed to the maximum building envelope, resulting in an increase in light and glare from new sources. This would be similar to the impacts of the 2009 Housing Element. Overall, similar to the 2009 Housing Element, impacts related to aesthetics would be ***less than significant.***

Population and Housing

Similar to the 2004 Housing Element and 2009 Housing Element, residential development in the City would occur regardless of the policies contained in Alternative A given that the City has available capacity to meet the RHNA and the RHNA could be accommodated under Alternative A. Additionally, similar to the 2004 Housing Element and 2009 Housing Element, Alternative A would not trigger the need for roadway expansions or result in the extension of infrastructure into previously unserved areas. Additionally, similar to the 2004 Housing Element and 2009 Housing Element, no substantial change in the workers to household ratio would occur between 2005 and 2025, and no impact to the jobs/housing balance would occur.

2004 Housing Element Comparison

Similar to the 2004 Housing Element, Alternative A encourages new housing in Downtown, in underutilized commercial and industrial areas, and increased housing in neighborhood commercial districts and mixed-use districts near Downtown. However, Alternative A encourages increased density to a lesser extent than the 2004 Housing Element. Alternative A would not promote density or other policies that intend to support attainment of the RHNA. However, Alternative A, while allowing for growth, may not meet the need for housing at all income levels as outlined in the most current RHNA because Alternative A would not promote density as aggressively for affordable housing as the 2004 Housing Element.

Similar to the 2004 Housing Element, Alternative A encourages housing on public lands and in secondary units and also promotes housing opportunities that would avoid displacement of existing or affordable housing. The purpose of the 2004 Housing Element is to address housing supply; housing retention; housing condition; housing affordability; housing choice; homelessness; housing density, design, and quality of life; and regional and state housing needs. Alternative A would not increase housing supply to the extent that would occur under the 2004 Housing Element and may not meet regional and state housing needs to the extent of the 2004 Housing Element primarily due to the differences in the promotion of density. While the RHNA could be accommodated under Alternative A, the creation of housing under this alternative would have less policy support. Therefore, impacts under Alternative A to housing supply would be greater than under the 2004 Housing Element because they would not as aggressively meet the RHNA allocation. Overall, similar to the 2004 Housing Element, impacts related to population and housing under Alternative A would be ***less than significant.***

2009 Housing Element Comparison

The 2009 Housing Element encourages housing in all new commercial or institutional projects, near major transit lines, and through community planning efforts. Overall, Alternative A would promote increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element, which limits its encouragement of increased density to more limited locations in the City. Therefore, impacts due to increased density under Alternative A would be greater than under the 2009 Housing Element. Unlike the 2009 Housing Element, Alternative A would not include policies that discourage the destruction or reduction of housing for parking, reduce housing displacement pressures that could be exerted by a lack of suitable housing units, or support the production, management, and preservation of affordable units. In addition, Alternative A would not as aggressively ensure the relocation of displaced tenants. This impact would be greater than under the 2009 Housing Element.

The purpose of the 2009 Housing Element is to address adequate housing sites; conservation and improvement of existing housing stock; equal housing opportunities; affordable housing; removing constraints to the construction and rehabilitation of housing; maintaining the character of neighborhoods; and balancing construction and infrastructure. Alternative A would ensure adequate housing sites, but to a lesser extent than what would occur under the 2009 Housing Element, and therefore potential impacts related to population and housing could be greater under Alternative A than under the 2009 Housing Element. Nevertheless, similar to the 2009 Housing Element, impacts related to population and housing under Alternative A would be ***less than significant.***

Cultural Resources

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements Alternative A could result in a substantial adverse change to a historical resource by encouraging housing which results in inappropriate alterations and/or additions, inappropriate new construction, and demolition by neglect. Similar to the proposed 2004 and 2009 Housing Elements, Alternative A would not directly result in the construction of residential units, but by directing housing to locations where residential growth is appropriate, promoting the retention of existing housing, and encouraging the provision of affordable housing in accordance with the City's needs, Alternative A could result in inappropriate alterations, additions, or new construction. In addition to impacts to individual properties, cumulative impacts could arise in these areas over the course of time thereby diminishing the historic significance of the area.

Similar to the 2004 and 2009 Housing Elements, under Alternative A new construction, alterations, and demolitions would be required to undergo environmental review to determine any impacts to historic resources. However, the policies in Alternative A reflect the historic preservation context of two decades ago, prior to substantial changes in both the City's approach to historic preservation and the requirements for review of historical resource impacts under CEQA. Therefore, Alternative A does not contain policies that protect historic resources to the same degree as either the 2004 or 2009 Housing Element. The potential for demolition of historic buildings under Alternative A could be incrementally greater than under either the 2004 or 2009 Housing Element. Section 15064.5 of the CEQA Guidelines specifies that any project that causes a substantial adverse change to a historical resource (e.g. through demolition or inappropriate addition) is a project that has a significant impact; therefore, if Alternative A incrementally increases the potential for demolition of historic buildings due to the absence of policies protecting historic resources, such demolition would result in a significant impact on the environment. While the City's review procedures for historic resources would continue to act as a disincentive for such proposals, any increase in the potential for loss of a historic resource at a programmatic level would be significant under CEQA. Therefore, Alternative A could result in greater impacts on historic resources than the 2004 and 2009 Housing Element.

The 2004 Housing Element promotes increased density more so than Alternative A, which could lead to an increase in inappropriate additions more so than Alternative A. Additionally, impacts related to historic resources could be incrementally greater under Alternative A than under the 2009 Housing Element, which more strongly encourages consistency with historic districts and the strengthening of an area's sense of history.

Similar to the 2004 and 2009 Housing Elements, Alternative A could result in a substantial adverse change to an archeological or paleontological resources by increasing potential to require deep foundations or soil improvements, soils disturbance, or directing housing to areas with high potential for archeological deposits near the existing surface. However, this impact would be reduced more under Alternative A than under the 2004 Housing Element, which contains policies that could increase the potential to result in deep foundations or soil improvements, disturb soils in areas where archeological resources are close to the existing surface, and direct housing to areas where archeological sites are concentrated. Impacts related to archeological and paleontological resources would also increase under Alternative A more so than under the 2009 Housing Element, which promotes policies with the potential to result in deep foundations or soils improvements and direct housing to areas where archeological sites are heavily concentrated less so than under Alternative A. Both the 2004 Housing Element and the 2009 Housing Element contain policies that encourage reduced parking requirements, which could reduce the need for excavation, that are not included in Alternative A; therefore, Alternative A could result in incrementally greater impacts to archeological and paleontological impacts related to excavation for parking. However, it is expected that any such impacts would be mitigated through the Department's demonstrated mitigation measures applied to archeological resources as appropriate. Overall, Alternative A would result in a reduced impact to archaeological and paleontological resources as compared to the 2004 and 2009 Housing Elements; however, similar to the 2004 Housing Elements and potentially greater impacts as compared to the 2009 Housing Elements these impacts would be less than significant.

Similar to the 2004 and 2009 Housing Elements, Alternative A would have the potential to disturb human remains. This impact would be incrementally reduced due to the fewer number of housing units that could potentially be constructed. Overall, due to the fact that potential impacts to historic buildings could be incrementally greater than under Alternative A than under the 2004 and 2009 Housing Elements impacts to cultural resources would be ***potentially significant***.

Transportation and Circulation

2004 and 2009 Housing Elements Comparison

The 1990 Residence Element contains policy 2.2, which encourages higher residential density in areas adjacent to Downtown, in underutilized commercial and industrial areas, and in neighborhood commercial districts, similar to, but at a lesser degree than the 2004 and 2009 Housing Element policies.

It is therefore anticipated that under Alternative A, less future growth would occur in proximity to job cores, services and/or along transit lines. As discussed in the analysis of the 2004 and 2009 Housing Elements, policies that promote development close to jobs and services and/or along transit lines are intended to reduce citywide vehicle trips and promote alternative modes of transportation, including transit, bicycling and walking. Without these policies, it is more likely that the 37 intersections anticipated to operate at unacceptable levels of service under future 2025 Cumulative Conditions would continue to operate unacceptably.

Under Alternative A, no impacts are anticipated to occur to the City's transit system. Alternative A would not encourage a mode shift to alternative transportation options as strongly as either the 2004 or 2009 Housing Element policies because Alternative A does not encourage development in areas where such alternative transportation options exist such as along transit lines or on transit streets; therefore no changes are anticipated to the transit system under 2025 Cumulative Conditions.

Parking Provisions

Alternative A does not contain any policies intended to reduce parking requirements or reduce the need for parking. As discussed in the Transportation Impact Study (TIS), a reduced parking requirement is a strategy to shift modes of transportation to transit, bicycling or walking. It is therefore anticipated that maintaining the current parking provisions would increase the number of vehicle trips citywide, above those levels anticipated under the 2004 and 2009 Housing Elements, but not in excess of those anticipated under future 2025 Cumulative Conditions. Therefore, it is more likely that the 37 intersections anticipated to operate at unacceptable levels of service under future 2025 Cumulative Conditions would continue to operate unacceptably. No changes are anticipated to the transit system under 2025 Cumulative Conditions because the No Project Alternative does not include reduced parking provisions.

Residential Density Provisions

Alternative A includes policies directed at increasing residential density. However, the 2004 Housing Element contains more policies aimed at increasing residential density to a greater degree than Alternative A. As compared with the 2009 Housing Element, the No Project Alternative promotes increased density on a broader, citywide scale. The 2009 Housing Element does contain policies that would increase residential density, although through more limited means (for affordable housing and through community planning processes). As discussed in the TIS, increased residential density is correlated with reduced auto ownership and reduced VMT, resulting in overall beneficial impacts to the City transportation network. Therefore, the 2004 Housing Element would result in more beneficial impacts to the City transportation network than the No Project Alternative, and similar impacts to the transportation network as the 2009 Housing Element policies. The No Project Alternative policies that would increase residential density, could also promote the use of alternative transportation, shifting a portion of trips to transit. However, the No Project Alternative would not be anticipated to affect future 2025 Cumulative transit conditions.

Conclusion

As discussed above, the No Project Alternative can be expected to result in an overall increase in citywide vehicle trips as compared to the 2004 and 2009 Housing Elements because the No Project Alternative does not promote the use of alternative transportation to the degree that the 2004 and 2009 Housing Elements do. However, the effects of future development on the roadway network under Alternative A would not be expected to exceed 2025 Cumulative Conditions. Furthermore, the No Project Alternative does not propose any new residential development, and would therefore, not generate any new person trips.

Additionally, the No Project Alternative is not anticipated to affect future 2025 Cumulative transit conditions and would therefore, have no affect on the City transit system. The No Project Alternative would have no impact on citywide pedestrian or bicycle facilities, loading areas, emergency vehicle access, or impacts from construction for the same reasons as the 2004 and 2009 Housing Element.

Noise

Similar to the conditions under the 2004 Housing Element and 2009 Housing Element, the City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. Therefore, Alternative A would have ***no impact*** with respect to airport noise.

2004 Housing Element Comparison

Alternative A promotes density to a lesser degree than the 2004 Housing Element. The reduced amount of housing construction associated with less density could result in less noise-generating activity associated with new housing construction. Similar to the 2004 Housing Element, Alternative A would not result in an increase in demolition, which would create demolition-related noise. Both Alternative A and 2004

Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. Therefore, similar to the 2004 Housing Element, impacts from exposure of people to or generation of excessive groundborne vibration or groundborne noise would be ***less than significant*** under Alternative A.

Similar to the 2004 Housing Element, Alternative A could promote the placement of housing in industrial and commercial areas. Both Alternative A and the 2004 Housing Element include policies that direct growth to certain areas of the City and policies that promote increased density, both of which could consolidate construction activities to those areas and incrementally increase construction duration in those areas. Alternative A also promotes increased density and housing in non-residential areas, but to a lesser extent than the 2004 Housing Element. Therefore, impacts from the potential to expose people to or generate excessive noise levels or result in a substantial permanent increase in ambient noise levels would be less than under the 2004 Housing Element.

Similar to the 2004 Housing Element, Alternative A promotes housing construction on in-fill sites in industrial and commercial areas to the same extent as the 2004 Housing Element. This would result in a similar potential for exposing residents to higher noise levels associated with these types of non-residential uses; therefore, this impact would be similar to the 2004 Housing Element. Noise impacts under Alternative A would be incrementally less because Alternative A does not as aggressively promote increased density. Additionally, Alternative A could result in less exposure of people to non-residential noise sources. However, as with the 2004 Housing Element, compliance with Title 24 may not mitigate exterior noise on private open space or other site-specific conditions may warrant acoustical monitoring and analysis beyond that required for Title 24 compliance. Therefore, as with the 2004 Housing Element, Alternative A, would result in significant impact with respect to exposing noise sensitive receptors to noise levels in excess of established standards and promoting residential development that may be substantially affected by existing noise levels. Compliance with Mitigation Measure M-NO-1 would reduce Alternative A's impact on noise sensitive receptors to ***less than significant with mitigation***, similar to the 2009 Housing Element.

New construction would be required to comply with the previously discussed federal, state, and local regulations, including the Article 29 of the San Francisco Police Code. New construction that complies with the City's noise ordinance would generally be determined to have a less than significant impact with respect to temporary or periodic increases in noise levels. The SFDPH, in cooperation with the Police Department, updated the City's noise standards (Article 29 of the Police Code) in 2008. Although the 2008 update did not update construction noise requirements, the City, through the Board of Supervisor's Noise Task Force or other appropriate forum, will continue to update construction noise standards as appropriate, if and when the conditions warrant.[3] Overall, these impacts would be less than noise impacts under the 2004 Housing Element and these impacts would still remain ***less than significant with mitigation*** for Alternative A.

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[3] Updates to the City's construction noise standards could be modeled after the City of New York's construction noise standards (Title 15, Chapter 28, New York Administrative Code).

2009 Housing Element Comparison

Relative to the 2009 Housing Element, Alternative A promotes increased density on a broader, citywide, scale to a greater extent than the 2009 Housing Element. By directing growth to certain areas of the City and promoting increased density standards, the 2009 Housing Element would consolidate new construction within those areas and incrementally increase average construction duration, thereby resulting in a temporary or periodic increase in ambient noise levels compared to Alternative A. This reduced amount of housing construction could result in less noise-generating activity associated with new housing construction. Similar to the 2009 Housing Element, Alternative A would not result in an increase in demolition, which would create demolition-related noise. Both Alternative A and 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

Unlike the 2009 Housing Element, Alternative A does not promote increased density of new construction near transit infrastructure as aggressively as the 2009 Housing Element. Therefore, impacts from the potential to expose people to or excessive groundborne vibration or groundborne noise levels due to the proximity to transportation infrastructure would be less than under the 2009 Housing Element.

Alternative A would not promote housing construction within single-use development projects to the same extent as the 2009 Housing Element, and would not potentially expose residents to higher noise levels associated with inclusion of housing within these types of non-residential uses. However, as with the 2009 Housing Element, compliance with Title 24 may not mitigate exterior noise on private open space or other site-specific conditions may warrant acoustical monitoring and analysis beyond that required for Title 24 compliance. Therefore, as with the 2009 Housing Element, Alternative A would result in significant impact with respect to exposing noise sensitive receptors to noise levels in excess of established standards and promoting residential development that may be substantially affected by existing noise levels. Compliance with Mitigation Measure M-NO-1 would reduce Alternative A's impact on noise sensitive receptors to ***less than significant with mitigation***, similar to the 2004 Housing Element.

Therefore, while noise impacts under Alternative A, because Alternative A does not promote housing near transit as aggressively as the 2009 Housing Element, would potentially expose fewer people to excessive groundborne vibration or noise. However, Alternative A would also promote housing in industrial and commercial areas (with higher noise impacts) more so than the 2009 Housing Element. As discussed previously, new construction that complies with the City's noise ordinance would generally be determined to have a less than significant impact with respect to temporary or periodic increases in noise levels. The actual potential for exposure to noise would be highly dependent on individual site locations; however, it is expected that these impacts would still remain ***less than significant with mitigation.***

Air Quality

2004 and 2009 Housing Element Comparison

Consistency of the proposed Housing Elements with regional air quality plans can be determined by comparing the growth factors used to generate the City's RHNA allocation with those used in the most recently adopted regional air quality plan, the Bay Area 2005 Ozone Strategy. The 2005 Ozone Strategy growth assumptions for Bay Area communities are based on ABAG's Projections. The Housing Elements are based on the Regional Housing Needs Allocation (RHNA) evaluation. As both the 2004 and 2009 Housing Elements and the 2005 Ozone Strategy utilize ABAG projections, the 2004 and 2009 Housing Elements would not result in a significant impact on regional air quality planning efforts.

Although the 2004 and 2009 Housing Elements would not result in the construction of residential units, by promoting increased density, the 2004 and 2009 Housing Elements policies could contribute to an existing or projected localized air quality violation by promoting increased density in certain areas of the City, thereby consolidating new construction within those areas and potentially contributing to localized air quality impacts. Alternative A would not promote increased density to the same degree as the 2004 Housing Element, but would promote density more generally Citywide than the 2009 Housing Element. Increased density standards under the 2004 and 2009 Housing Elements could promote longer construction durations associated with construction of buildings containing a greater number of units, which could result in an increase in construction emissions for the construction project. Therefore, impacts from construction emissions would be incrementally reduced under Alternative A.

However, as Alternative A would encourage fewer housing units near transit than either the 2004 or 2009 Housing Elements and could therefore, result in incrementally greater impacts to air quality, including CO concentrations due to an increase in Vehicle Miles Traveled. Similar to the 2004 or 2009 Housing Elements, Alternative A would not directly expose residents to TACs because all future housing units would be required to undergo review of new housing projects consider the location of industrial sites or other sources of air pollution in the design of the residential building, to orient air intake away from the sources of pollution. Furthermore, the Potential Roadway Exposure Zone Map, codified in Article 38 of the Health Code, provides a buffer around significant TRP emission sources using $PM_{2.5}$ as a proxy for TRP exposures. However, policies contained in the Air Quality Element and Transportation Element of the General Plan, as well as rules codified in Article 38 of the Health Code, would reduce the impacts of the Alternative A, as with the 2004 and 2009 Housing Elements, with respect to directing housing potentially near sources of air pollution. Similar to the 2004 and 2009 Housing Elements, Alternative A would encourage the construction of housing and would not result in the creation of objectionable orders. Overall, impacts to air quality under Alternative A could be incrementally greater than under the 2004 and 2009 Housing Elements due to potential increases in Vehicle Miles Traveled. However, this impact would still be ***less than significant***.

Greenhouse Gases

2004 Housing Element Comparison

Both Alternative A and the 2004 Housing Element include policies that would ultimately result in reduced GHG emissions by encouraging: (1) housing in proximity to job cores, neighborhood services, and/or transit; (2) increased housing density; (3) infill development; (4) preservation of existing housing stock; and (5) energy efficiency. However, Alternative A does not contain policies that would specifically encourage housing in proximity to neighborhood commercial districts, or encourage increased density by removing parking requirements and increasing the amount of lot area available for residential use. Therefore, given that Alternative A does not include policies that would actively reduce GHG, this impact could be incrementally greater than under the 2004 Housing Element, although still ***less than significant***.

2009 Housing Element Comparison

Both Alternative A and the 2009 Housing Element include policies that would ultimately result in reduced GHG emissions. These policies include providing housing: (1) in proximity to job cores, neighborhood services, and/or transit (although Alternative A does not as aggressively direct housing to transit); (2) by increasing housing density; (3) encouraging infill development; (4) preservation of existing housing stock or adaptive reuse of existing buildings; and (5) promoting energy efficiency. Each of these strategies could result in GHG emissions reductions. Additionally, the 2009 Housing Element includes a number of additional policies that speak to housing in proximity to job cores, neighborhood services and along transit that are not included in Alternative A. However, Alternative A contains additional policies that promote increased density more generally throughout the city, while the 2009 Housing Element includes increased density as a strategy to pursue during community planning processes, for housing along transit lines, and for affordable housing projects. Both Alternative A and the 2009 Housing Element include policies that promote infill development, preservation the City's existing housing stock, and energy efficiency of new development. Therefore, overall GHG impacts from Alternative A could be incrementally greater than under the 2009 Housing Element, although still ***less than significant***.

Wind and Shadow

2004 and 2009 Housing Elements Comparison

Alternative A promotes density to a lesser degree, and could result in lower building height in certain areas, than the 2004 and 2009 Housing Elements. However, wind impacts are project-specific and projects would be subject to the Planning Department's procedures requiring modification of any new building or addition that exceeds the wind criterion. New residential units would comply with the applicable regulations including Sections 147, 148, 243(c)(9), 249.1(b)(2), and 263.11(c) of the San Francisco Planning Code. However, overall the incremental difference resulting from the 2004 Housing Element would not be expected to be substantial because no height changes are proposed, and wind and shadow impacts would not be expected to be substantial. Therefore, this impact would be the same as the

2004 Housing Element and would have a ***less than significant*** impact with respect to the alteration of wind patterns.

Alternative A promotes density to a lesser degree, and could result in lower building height in certain areas, than the 2004 and 2009 Housing Elements. However, shadow impacts are project-specific and all applications for new construction or additions to existing buildings above 40 feet in height are reviewed by the Planning Department to determine whether such shading would affect Park property pursuant to Section 295 of the Planning Code. Further, applications for new development that could result in new shadow is evaluated for significance under CEQA. New residential units would comply with the applicable federal, state, and local regulations including Sections 146(a), 146(c), and 295 of the San Francisco Planning Code. Therefore, this impact would be the same as the 2004 and 2009 Housing Elements and would Alternative A have a ***less than significant*** impact with respect to the creation of new shadows.

Recreation

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative A would not directly increase the use of recreational facilities because it would not directly result in population growth. However, the potential for secondary effects resulting from new housing related to physical deterioration of recreation facilities resulting from population increases and/or use attributable to the proposed projects could occur under Alternative A. The City currently has a ratio of 7.0 acres of open space per 1,000 San Francisco residents and the City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Alternative A would not generate new development. Many open space acquisitions/expansions have been identified by the Planning Department and San Francisco Recreation and Park Department, independent of Alternative A and the proposed Housing Elements. Furthermore, SFRPD would continue to acquire new open space/recreation facilities pursuant to Proposition C. New development would be required to comply with Planning Code requirements for open space.

2004 Housing Element Comparison

Alternative A itself does not propose any recreational facilities. Alternative A would not directly increase the use of recreational facilities because it would not directly result in population growth. The City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Therefore, the City would not be required to provide or construct additional recreational facilities in response to any population growth.

Alternative A could result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, or could create the need for new facilities. Unlike the 2004 Housing Element Implementation Measure 11.8.1, which calls for studying reduced private open space and potential revisions to the Planning Code, Alternative A does not propose to allow reductions to private open space requirements. Reductions in private open space increase the potential for greater use of public recreation facilities, accelerating deterioration or creating the need for new facilities. Any such impacts under Alternative A therefore would be expected to be incrementally less than under the 2004 Housing Element. Moreover, any specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. Therefore, similar to the 2004 Housing Element, impacts related to increased use or the construction or expansion of recreational facilities would be ***less than significant***.

2009 Housing Element Comparison

The 2009 supports more limited consideration of reductions to required open space than the 2004 Housing Element, and contains policies and implementation measures that would serve to discourage such reductions in areas that are currently underserved with recreational facilities. Therefore, the impacts of Alternative A would be expected to be similar to the 2009 Housing Element with regard to increased use of parks resulting in deterioration or the need for new facilities. Alternative A itself does not propose any recreational facilities. Alternative A would not directly increase the use of recreational facilities because it would not directly result in population growth. The City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Therefore, the City would not be required to provide or construct additional recreational facilities in response to any population growth. Specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. Similar to the 2009 Housing Element, impacts related to increased use of parks and recreational facilities, or the construction or expansion of recreational facilities would be ***less than significant.***

Utilities and Service Systems

The City requires National Pollution Discharge Elimination System (NPDES) permits, as administered by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), according to federal regulations for both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the United States. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. New construction could result in impacts related to water or wastewater treatment facilities if new housing would results in the additional need for water or wastewater treatment in areas that do not have the available capacity to transport or process the additional water or wastewater. This could require the construction or expansion of water or wastewater treatment facilities. Although Alternative A, like the 2004 Housing Element and 2009 Housing Element, would not directly result in the construction of residential units, all new development would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Therefore, neither the proposed Housing Elements nor Alternative A would result in an exceedance of wastewater treatment requirements. Additionally, the NPDES Phase I and Phase II requirements would regulate discharge from construction sites. All new development would be required to comply with all applicable wastewater discharge requirements issued by the State Water Resources Control Board (SWRCB) and RWQCB. Therefore, implementation of the proposed General

Plan Update would not exceed applicable wastewater treatment requirements of the RWQCB with respect to discharges to the sewer system or stormwater system within the City. Therefore, similar to the 2004 and 2009 Housing Element, Alternative A would have ***no impact*** with respect to the exceedance of wastewater treatment requirements.

According to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. As of 2006, the most recent year for which California Integrated Waste Management Board-reviewed rates are available, the City achieved a diversion rate of 70 percent. San Francisco currently recovers 72 percent of the materials it discards. Therefore, similar to the 2004 and 2009 Housing Element, Alternative A would have ***no impact*** related to compliance with solid waste statutes and regulations.

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, all new development under Alternative A would be required to comply with regulations, including the City's Green Building Ordinance, Article 21 of the San Francisco Public Works Code, and the Residential Water Conservation Ordinance. Because Alternative A promotes increased density more generally throughout the City than the 2009 Housing Element, but less so than the 2004 Housing Element, it can be expected that under Alternative A more multi-family housing units would be developed as compared to the 2009 Housing Element, but less than the 2004 Housing Element. Multi-family housing uses less water than single-family housing. Therefore, the impacts of Alternative A with respect to water use would be less than that for the 2009 Housing Element, but greater than that for the 2004 Housing Element.

Alternative A could encourage the construction of new housing in areas that do not have the available capacity to transport or process the additional water or wastewater. However, Alternative A could result in less density and housing construction, potentially resulting in fewer number of people requiring water or wastewater treatment service as compared to the 2004 Housing Element. Additionally, Alternative A would not promote housing construction on in-fill sites in industrial and commercial areas, or Downtown, potentially resulting in a change in the volume and type of required water or wastewater treatment to the same extent as the 2004 Housing Element. However, similar to the 2004 Housing Element, all new development would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Therefore, impacts to wastewater from Alternative A would be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to a potential decrease in housing units resulting from the differences in policy direction.

Construction associated with housing could potentially result in an increase of impervious surfaces on sites that could increase the rate of runoff, exceeding the capacity of stormwater drainage facilities. However, this increase in impervious surfaces might be less than under the 2004 and 2009 Housing Elements; therefore, this impact would be incrementally reduced. Alternative A would not promote density to the same extent as the 2004 and Housing Element, and therefore would not have the same potential to incrementally increase the demand for water supply to the same extent as the 2004 and 2009

Housing Elements. Additionally, all new development would be required to comply with federal, state, and local regulations, including the City's Green Building Ordinance, a Water Supply Availability Study, North Basin Groundwater Management Plan, WSIP, Article 21 of the San Francisco Public Works Code, and the Residential Water Conservation Ordinance. Therefore, impacts from impervious surfaces and water demand from Alternative A would be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to the decrease in the promotion of density.

New housing would require solid waste disposal. Similar to the 2004 and 2009 Housing Elements, additional collection trucks and personnel could be required to provide services to new housing.Similar to the 2004 Housing Element, all new development would be required to comply with the previously discussed state and local regulations, including the City's Green Building Ordinance, Ordinance No. 27-06, and the Mandatory Recycling and Composting Ordinance (all of which contribute to the City's goal of zero waste by 2020). Therefore, impacts to solid waste generation from Alternative A would be similar to the 2004 and 2009 Housing Elements due to the decrease in the promotion of density.

Similar to the 2004 and 2009 Housing Elements, an increase in density on housing sites under Alternative A would likely be accomplished through the development of multi-family housing instead of single-family housing, which uses less energy than single-family housing. Therefore, impacts to energy usage from Alternative A would be similar, but incrementally smaller than the 2004 Housing Element and greater than the 2009 Housing Element due to the decrease in the promotion of density. Overall, impacts to utilities and services systems from Alternative A would be similar as the 2004 and 2009 Housing Elements and ***less than significant***.

Public Services

2004 and 2009 Housing Elements Comparison

Increased density pursuant to the policy direction in Alternative A could potentially result in an increase in the number of people requiring fire protection or police services or a change in the level of service required. Alternative A promotes increased density, potentially resulting in a need for additional schools and the SFUSD would not have capacity to accommodate the students in existing facilities, thereby requiring the construction or expansion of school facilities. However, this increase would be incrementally less than under the 2004 and 2009 Housing Elements, which encourage housing to a greater extent than Alternative A and also could potentially direct development to non-residential areas where services may not be located. Additionally, Alternative A could result in the need for public libraries or public health facilities in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of libraries or public health facilities. This impact would be incrementally reduced under Alternative A due to the decreased promotion of density. Therefore, impacts to public services from Alternative A would be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to the decrease in the promotion of density. Overall, impacts to public services from Alternative A would be similar as the 2004 and 2009 Housing Elements and ***less than significant***.

Biological Resources

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, Alternative A could result in impacts to biological resources if new projects result in disturbance from construction activities, tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g., development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan. Because Alternative A promotes increased density more generally throughout the City than the 2009 Housing Element, but less so than the 2004 Housing Element, it can be expected that under Alternative A impacts related to biological resources as compared to the 2009 Housing Element, but less than the 2004 Housing Element. These impacts would be incrementally reduced under Alternative A due to the decreased promotion of density under this alternative. In addition, all housing constructed under Alternative A would be required to comply with the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code, San Francisco's Green Building Ordinance, San Francisco's IPM Ordinance, San Francisco Tree Protection Ordinance, and San Francisco's Urban Forestry Ordinance, which would further minimize impacts related to biological resources. Overall, impacts to biological resources under Alternative A would be less than under the 2004 Housing Element, but greater than under the 2009 Housing Element, but would remain ***less than significant***.

Geology and Soils

The San Francisco Bay Area and surrounding areas are characterized by numerous geologically young faults. However, there are no known fault zones or designated Alquist-Priolo Earthquake Fault Zones in the City. Therefore, there would be ***no impact*** with respect to rupture of a known earthquake fault under Alternative A. Additionally, Alternative A would not result in development that uses septic tanks or alternative wastewater disposal systems. Therefore, there would be ***no impact*** with respect to septic tanks or alternative wastewater disposal systems under Alternative A.

2004 and 2009 Housing Elements Comparison

New construction could expose people and structures to geologic risks, including from rupture of a known earthquake fault, groundshaking, ground failure, or liquefaction. Additionally, housing development could be located on expansive or unstable ground, or on or near an earthquake fault, or areas prone to landslides. Policies that promote increased density could also expose people to geologically hazardous areas. In addition, increasing density could result in heavier buildings, which could increase the weight on soil beyond what it has previously experienced. However, federal, state, and local regulations have been adopted to reduce impacts from seismic hazards. These regulations include the San Francisco Building Code (Building Code), Earthquake Hazards Reduction Act, Alquist-Priolo Earthquake Fault Zoning Act, and Seismic Hazards Mapping Act of 1990. The State of California provides minimum standards for building design through the CBC, including standards that must be met for construction on expansive soils. Similar to Alternative A, impacts related to expansive soils under Alternative A would be ***less than significant***. However, according to Figure V.O-1 in Section V.O (Geology and Soils), approximately 10,455 units in the City's pipeline occur within landslide zones, with the capacity for another 1,013 units. The areas of the City most susceptible to landslide hazards are the Candlestick, Hunters Point Shipyard, and Bayview Hunters Point neighborhoods. According to Figure V.O-5, approximately 37,672 units in the City's pipeline occur within liquefaction zones, with the capacity for another 16,438 units. The areas of the City most susceptible to liquefaction hazards are the Candlestick, Treasure Island, and Park Merced neighborhoods.

Housing construction under Alternative A could result in soil erosion through the need for grading activities. All new development would be required to comply with regulations, including State and City Building Codes that include regulations that have been adopted to reduce impacts from grading and erosion. Similar to Alternative A, impacts related to soil erosion under Alternative A would be ***less than significant***.

Similar to the 2004 and 2009 Housing Elements, Alternative A could require grading activities that have the potential to substantially change the topography or any unique geologic or physical features on project sites. However, grading impacts are project-specific and all grading and building permit applications for new construction or additions to existing buildings would be reviewed by the Planning Department to determine whether grading activities might occur with the potential to substantially change the topography of a project site. Furthermore, as part of the permitting process, construction activities for new residential units would be required to comply with the Building Code regulations related to grading and excavation activities. Similar to Alternative A, this impact would be less than significant. Overall, impacts to geology and soils from Alternative A would be similar to the 2004 and 2009 Housing Elements and ***less than significant***.

Hydrology and Water Quality

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, increased housing construction and density could occur under Alternative A, potentially resulting in the need for construction activities, increase in demand for wastewater treatment, or an increase in the rate or quality of runoff. Additionally, Alternative A could result in construction associated with housing that would potentially alter existing drainage patterns through grading and construction activities. Because the City is an urban setting and development typically involves the reuse of already developed sites, new construction frequently has no effect on existing drainage patterns. However, the City also has locations with steep slopes and development in these locations can affect drainage patterns. This impact could be incrementally reduced in comparison to the 2004 Housing Element if a smaller number of housing units is constructed. Additionally, similar to the 2004 and 2009 Housing Elements, development under Alternative A would be required to comply with the applicable regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, and Water Quality Protection Program. Therefore, similar to the 2004 and 2009 Housing Elements, impacts with respect to violation of any water quality standards, waste discharge requirements, or quality of runoff would be ***less than significant***.

The construction of new housing could require dewatering or result in groundwater drawdown. Similar to the 2004 and 2009 Housing Elements, although short-term construction groundwater dewatering may be necessary at certain locations (e.g., for installation of building foundations or underground utilities), dewatering would be regulated by the SFPUC and would have only a minor temporary effect on the groundwater table elevation in the immediate vicinity of the activity, and would not measurably affect groundwater supplies. This impact would be similar to the 2004 Housing Element and ***less than significant***.

Similar to the 2004 and 2009 Housing Elements, Alternative A could result in the construction of housing in 100-year flood hazard areas that would be subject to or could impede or redirect flood flows. However, similar to the 2004 Housing Element, all new development would be required to comply with federal, state, and local regulations. Alternative A would not affect the pipeline or capacity units located in a flood area as shown in Figure V.P-1 and -2. However, if fewer units are constructed overall without the 2004 Housing Element those units might not be located within flood zones. Additionally, new construction could result in impacts related to flooding if housing is placed near above ground reservoirs and tanks. However, the City monitors all reservoirs in the City and is completing a project that will significantly reduce any risks of flooding from the City's reservoirs, including the Sunset Reservoir. Therefore, impacts under Alternative A from dam inundation would be similar to the 2004 and 2009 Housing Elements, and would be ***less than significant***.

New construction under Alternative A could result in impacts related to seiche, tsunami, or mudflow if housing is placed near open water, near bodies of water, or near steep slopes in the City. This impact would be incrementally less under Alternative A than under the 2004 and 2009 Housing Elements due to the smaller number of housing units that would be constructed. In addition, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with the previously discussed federal, state, and local regulations, including the Department of Building Inspection's approval of the final plans for any specific development; therefore, this impact would be less than significant. Overall, impacts to hydrology and water quality from Alternative A would be reduced from the 2004 and 2009 Housing Elements due to the smaller number of housing units and this impact would be ***less than significant***.

Hazards/Hazardous Materials

The City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. Therefore, similar to the 2004 Housing Element or 2009 Housing Element, Alternative A would have ***no impact*** with respect to air safety.

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, Alternative A could stimulate in increased density and/or housing construction, potentially resulting in the increased transport, use, or disposal of hazardous materials. However, all new development would be required to comply with federal, state, and local regulations, including the Emergency Operations Plan (EOP), Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Additionally, Alternative A could result in incrementally reduced impacts from hazardous materials in comparison to the 2004 Housing Element if fewer units are constructed in the absence of 2004 and 2009 Housing Elements policy direction. However, similar to the 2004 and 2009 Housing Elements, impacts with respect to the routine transport, use, or disposal of hazardous materials from Alternative A would be mitigated at the project level and would therefore be ***less than significant***.

Alternative A could result in impacts related to the upset and accident conditions because new housing construction could increase transport of hazardous materials for delivery and disposal purposes, which could in turn increase the risk of upset and accident conditions during transport. However, this impact could be reduced indirectly as compared to the 2004 and 2009 Housing Elements due to the decreased promotion of density. Additionally, all new development would be required to comply with all applicable federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Therefore, this impact would be incrementally reduced compared to the 2004 and 2009 Housing Elements. Similar to the 2004 and 2009 Housing Elements, this impact would be ***less than significant***.

New development could occur on sites that have been identified as being contaminated from the release of hazardous substances in the soil, including industrial sites, sites containing leaking underground storage tanks, and large and small-quantity generators of hazardous waste. This could be less under Alternative A than under the 2004 and 2009 Housing Elements, if fewer construction projects occur. However, similar to the 2004 and 2009 Housing Elements, impacts related to hazardous waste sites are typically project-specific and projects on Brownfield sites would be subject to the review and/or mitigation by the City's Department of Public Health (SFDPH) and/or the applicable regulator of hazardous waste. Specific mitigation measures would be developed in consultation with the SFDPH based on the real or perceived contaminants that may be onsite. This impact would be similar to the 2004 Housing Element and would be ***less than significant***.

Alternative A could locate residents in areas that would result in congestion of an emergency evacuation route. In the event of a natural disaster, increased congestion could slow an evacuation effort within the City. However, the City's Emergency Response Plan (ERP), prepared in April 2008, was developed to ensure allocation of and coordination of resources in the event of an emergency in the City. The existing street grid provides ample access for emergency responders and egress for residents and workers, and similar to the 2004 and 2009 Housing Elements, Alternative A would neither directly nor indirectly alter that situation to any substantial degree.

New development could result in impacts related to risk associated with fire if housing is constructed in near areas with potential for wildland fires or if new housing would include certain features that would put residents or workers at risk. San Francisco ensures fire safety primarily through provisions of the San Francisco Building Code and Fire Code. Existing buildings are required to meet standards contained in these codes. All housing constructed under Alternative A, including high-rise residential buildings up to forty stories, would be required to meet standards for emergency access, sprinkler and other water systems, and other requirements specified in the San Francisco Fire Code. Standards pertaining to equipment access would also be met. Plan review for compliance with San Francisco Fire Code requirements, to be completed by Department of Building Inspection (DBI) and the San Francisco Fire Department (SFFD), would minimize fire-related emergency dispatches, reducing the demand for fire protection services in the City. This impact might be reduced under Alternative A due to the decreased promotion of housing. Similar to the 2004 and 2009 Housing Elements, impacts would be less than significant. Overall, impacts to hazards and hazardous materials from Alternative A would be reduced from the 2004 and 2009 Housing Elements due to the decreased promotion of density and this impact would be mitigated to ***less than significant*** at the project level.

Mineral/Energy Resources

The City is not a designated area of significant mineral deposits and no area within the City is designated as a locally-important mineral resource recovery site. Therefore, there would be ***no impact*** related to the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site.

2004 and 2009 Housing Elements Comparison

Under Alternative A, it is possible that fewer older housing units would be converted to more energy-efficient housing and the inclusion of energy efficient features would be promoted to a lesser degree than under the 2004 and 2009 Housing Elements. However, unlike the 2009 Housing Element, Alternative A could result in a decreased use of fuel, water, and energy associated with a decrease in demolition. New development would be required to comply with the previously discussed federal, state, and local regulations. Therefore, similar to the 2004 and 2009 Housing Elements projects constructed under Alternative A would be required to comply with the Environmental Protection Element of the San Francisco General Plan, San Francisco's Green Building Ordinance, San Francisco Residential Energy Conservation Ordinance, and San Francisco Sustainability Plan. New development would also have the opportunity to participate in voluntary programs, such as GoSolarSF and San Francisco's Green Priority Permitting Program. Therefore, similar to the 2004 and 2009 Housing Elements, Alternative A would have a ***less than significant*** impact with respect to the use of large amounts of fuel, water, or energy.

Agricultural Resources

The entire City is identified as Urban and Built-Up Land by the Department of Conservation and does not contain any important farmland. The City does not participate in the Williamson Act Program and no land within City boundaries is under Williamson Act contract. Therefore, under Alternative A there would be

no impact related to the direct conversion of Farmland to non-agricultural use, conflict with a Williamson Act contract, or the conversion of Farmland to non-agricultural use due to other changes in the existing environment.

Under Alternative A, there would be no changes to zoning or height and bulk districts. P Districts, which include most of the City's forest lands, would not be at risk for conversion to residential zoning. However, Alternative A could result in impacts if trees in other districts were removed, damaged, or otherwise physically affected by a new project. However, any project proposed under Alternative A would be required to comply with the San Francisco Tree Protection Ordinance and the required replacement ratios to minimize impacts related to the urban forest. Therefore, there would be ***no impact*** related to forest land and timberland zoning or the loss or conversion of forest land.

2004 Housing Element

The San Francisco Recreation and Park Department (SFRPD) supports and manages a program of 40 community gardens on City-owned property. Community gardens are allowed on SFRPD lands zoned Public Use (P) District and allowed in all Residential (RH, RC, RM) Districts. New housing could include projects built to the maximum allowable height and bulk capacity, which could block sun on plots currently used for urban farming or community gardens or otherwise physically affect community gardens. New housing could also result in development of lots currently used for community gardens. Under Alternative A, there would be no changes to zoning or height and bulk districts and therefore, no new conflicts with existing zoning for agricultural uses. Therefore, impacts under Alternative A would be similar to the 2004 Housing Element and ***less than significant***.

2009 Housing Element Comparison

Community gardens are allowed on SFRPD lands zoned P District and allowed in all R Districts. New housing could include projects built to the maximum allowable height and bulk capacity, which could block sun on plots currently used for urban farming or community gardens or otherwise physically affect community gardens. New housing could also result in development of lots currently used for community gardens. Under Alternative A, there would be no changes to zoning or height and bulk districts and therefore, no new conflicts with existing zoning for agricultural uses. Therefore, impacts under Alternative A would be similar to the 2009 Housing Element and ***less than significant***.

Attainment of Project Objectives

The objectives of the proposed Housing Elements are to provide a vision for the City's housing and growth management through 2014; maintain the existing housing stock to serve housing needs; ensure capacity for the development of new housing to meet the RHNA at all income levels; encourage housing development where supported by existing or planned infrastructure, while maintaining existing neighborhood character; encourage, develop and maintain programs and policies to meet projected affordable housing needs; develop a vision for San Francisco that supports sustainable local, regional and state housing and environmental goals; and adopt a housing element that substantially complies with

California housing element law as determined by the California Department of Housing and Community Development.

Under Alternative A: the No Project/Continuation of 1990 Residence Element Alternative, the 1990 Residence Element policies would remain in effect and the proposed 2004 Housing Element and 2009 Housing Element policies would not be implemented. Housing development in the City would continue as encouraged under the 1990 Residence Element. However, this alternative would use the most recently identified RHNA allocation (which would need to be met) and an updated Data and Needs Analysis.

Although Alternative A includes policies for affordable housing, housing accessibility for fair housing, and maintenance of housing stock, it may not address growth management or the RHNA to the extent of the 2004 or 2009 Housing Elements. While Alternative A could meet state requirements it may not achieve realization of the allocation as outlined in the most recent RHNA (which addresses growth through 2041) or ensure capacity for the development of new housing to meet the RHNA at all income levels as effectively as the 2004 or 2009 Housing Elements because Alternative A does not promote density as aggressively as the Housing Elements. Alternative A reflects the physical and regulatory context that existed at the time that the 1990 Housing Element was prepared; it would not constitute a set of policies and implementation actions calibrated to meet current requirements, conditions, priorities, and needs. Therefore, Alternative A would not be expected to achieve the RHNA goals for either the quantity or the affordability of housing as effectively as either the 2004 or the 2009 Housing Element. Meeting the RHNA is a key objective of the proposed projects. Therefore, Alternative A would not obtain one of the key objectives of the proposed projects.

Alternative B: 2004 Housing Element–Adjudicated

Alternative B includes the objectives, policies and implementation measures of the 2004 Housing Element minus those policies that were stricken by the court in the appeal of the 2004 Housing Element. Similar to Alternative A, this alternative would need to meet the most recently identified RHNA allocation and an updated Data and Needs Analysis.

The following policies and implementation actions were struck out by the Court of Appeal in its decision regarding the 2004 Housing Element:

- Policy 1.7: Encourage and support the construction of quality, new family housing.
- Implementation 1.7:
    - In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units, ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within permitted building envelopes in downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.

  - The Mayor's Office of Housing and the San Francisco Redevelopment Agency will continue to administer programs for development of affordable family rental housing. Priority will continue to be given to projects that include affordable family units for the homeless and those at-risk of homelessness, and include supportive services for residents.

  - The Planning Department will study the feasibility of "flexible" development projects to accommodate family growth, shrinkage, expansion, and extension. Loft sleeping areas, family rooms and master bedrooms could be designed to ease future conversion to efficiency apartments for family members, or as an income unit.

- Policy 11.1: Use new housing development as a means to enhance neighborhood vitality and diversity.

- Implementation 11.1:

  - The new Land Use Element will identify in-fill sites appropriate for mixed-use residential projects. Appropriate neighborhood serving retail, public facilities and supportive amenities should be encouraged.

  - The City will continue to implement its policy that the design of all housing sites and related amenities make a positive contribution to surrounding public space and to overall neighborhood vitality.

  - The Planning Department will encourage historic preservation and adaptive reuse of older buildings to enhance neighborhood vibrancy.

- Policy 11.5: Promote the construction of well-designed housing that enhances existing neighborhood character.

- Implementation 11.5:

  - The Planning Department will continue to study the construction methods and design components of well-designed housing that enhances the existing urban fabric of San Francisco.

  - The Planning Department will continue to use the Residential Design Guidelines when reviewing projects.

  - Each project will be considered on its own merit and on its ability to make a positive contribution to the immediate neighborhood and the City.

- Policy 11.6: Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.

- Implementation 11.6:
    - The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.
- Policy 11.7: Where there is neighborhood support, reduce or remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.
- Implementation 11.7:
    - The Planning Department will work to reduce parking in older neighborhoods and in other areas through a Better Neighborhoods type planning process with the support and input from local neighborhoods.
- Policy 11.8: Strongly encourage housing project sponsors to take full advantage of allowable building densities in their housing developments while remaining consistent with neighborhood character.
- Implementation 11.8:
    - The Planning Department, with the support and input from local neighborhoods, study the impacts of reduced parking and private open space provisions and will consider revising the Planning Code accordingly.
    - The Planning Department will work with housing advocates to educate residents on the benefits of traditional urban neighborhood supporting housing densities.
- Policy 11.9: Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.
- Implementation 11.9:
    - The City, through a Better Neighborhoods type planning process, will continue to work to improve and enhance housing with the goal of more housing and vital, attractive transit served neighborhoods.
    - The Planning Department will continue to employ Residential Design Guidelines and implement the General Plan to ensure new projects are compatible with established neighborhoods.

- The new Land Use Element will, within the framework of a comprehensive citywide action plan (CAP), identify areas where higher densities are appropriate.

- The updated Urban Design Element will reconcile the City's established and well formulated urban design principles with the City's housing objectives.

The following implementation actions were amended by the Court of Appeal in its decision regarding the 2004 Housing Element:

- Implementation 1.6:

  - The Planning Department will review the following incentives for commercial project developments in the Downtown C-3 District: floor-to-area ratio (FAR) exemption for housing; ~~no residential parking requirement; and no density requirements for residential projects.~~ Housing in excess of the base FAR in the Downtown General (C-3-G) and Downtown Support (C-3-S) Districts has also been proposed by the Board of Supervisors.

  - ~~The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill redevelopment survey areas. The Mid-Market redevelopment survey area will be re-zoned to include mixed-use residential areas and reduced residential parking requirements.~~

  - The Planning Department will continue to implement the Van Ness Avenue Plan which requires residential units over commercial uses.

  - The Planning Department will update the Land Use Element to define areas for mixed-use development focused along transit corridors that are determined to be served by sufficient and reliable transit.

The themes of Alternative B focus on increasing housing supply through higher density, encouraging family-sized housing, and reducing parking requirements to make more space available for housing units. The 2004 Housing Element-Adjudicated themes also focus on infill and mixed-use development, affordable housing, and utilization of City-owned vacant or underused sites. In addition, the 2004 Housing Element encourages new housing in Downtown and encourages increased housing in neighborhood commercial districts and mixed-use districts near Downtown. This would result in smaller/less dense projects overall, but potentially more projects.

Land Use

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative B would not include any extensions of roadways or other development features through a currently developed area that could physically divide an established community. Areas for future housing development would occur primarily as infill or at individual parcels as most future housing development would take place in established neighborhoods. With respect to division of a community, Alternative B would be similar to the 2004 Housing Element and 2009 Housing Element by encouraging additional residential growth in established areas within an established land use plan and there would be ***no impact***.

2004 Housing Element Comparison

Similar to the 2004 Housing Element, development under Alternative B would be subject to existing Area Plans and Redevelopment Plans and would serve to complement the policies and land uses in an Area Plan or Redevelopment Plan. Additionally, Alternative B would not conflict with any regional land use policies, the Regional Transportation Plan, or prevailing local plans, including BCDC policies, and the San Francisco planning policies (General Plan, Countywide Transportation Plan, MTA Strategic Plan, Bicycle Plan, and Urban Forest Plan).

Similar to the 2004 Housing Element, Alternative B would encourage new housing in Downtown and in underutilized commercial and industrial areas. Additionally, the 2004 Housing Element and Alternative B would encourage increased housing in neighborhood commercial districts and mixed-use districts near Downtown. While Alternative B would not increase density to the same extent as the 2004 Housing Element, these changes would be expected to affect the density of housing within new buildings more than the number of buildings constructed. Because housing would not change the occurrence of land use conflicts, this impact would be the same as under the 2004 Housing Element. Similar to the 2004 Housing Element, overall these impacts would be ***less than significant.***

2009 Housing Element

Similar to the 2009 Housing Element, development under Alternative B would be subject to existing Area Plans and Redevelopment Plans and would serve to complement the policies and land uses in an Area Plan or Redevelopment Plan. Additionally, Alternative B would not conflict with any regional land use policies, the Regional Transportation Plan, or prevailing local plans, including BCDC policies and the San Francisco planning policies (General Plan, Countywide Transportation Plan, MTA Strategic Plan, Bicycle Plan, and Urban Forest Plan).

Similar to the 2009 Housing Element, Alternative B would encourage housing in all new commercial or institutional projects, near major transit lines, and through community planning efforts. However, Alternative B would not increase density to the same extent as the 2009 Housing Element, thereby resulting in a similar potential for land use conflicts. Therefore, impacts to land use conflicts would be incrementally less under Alternative B than the 2009 Housing Element. However, similar to the 2009 Housing Element these impacts would be ***less than significant.***

Aesthetics

2004 and 2009 Housing Elements Comparison

Alternative B promotes density to a lesser degree than under the 2004 Housing Element, and perhaps to a similar degree as the 2009 Housing Element. Therefore, incrementally smaller residential buildings might be constructed, resulting in incrementally fewer potential impacts to scenic vistas. Alternative B might also reduce the potential for new development on vacant or undeveloped parcels or redevelopment of underutilized parcels that could affect existing natural features (and scenic resources) as compared to the 2004 and 2009 Housing Elements. Similar to the 2004 and 2009 Housing Elements, Alternative B includes policies to preserve landmark buildings and includes guidelines for development that are intended to preserve neighborhood character and that would protect existing visual character. Under Alternative B, it is possible that the density of new buildings would be reduced, with an incremental reduction in sources of light and larger expanses of glass resulting in a decrease in light and glare from new sources. This impact would be incrementally less than under the 2004 and 2009 Housing Elements. However, similar to the 2004 and 2009 Housing Elements, impacts from Alternative B would be ***less than significant.***

Population and Housing

Similar to the 2004 Housing Element and 2009 Housing Element, growth would occur regardless of Alternative B. Additionally, similar to the 2004 Housing Element and 2009 Housing Element, Alternative B would not trigger the need for roadway expansions or result in the extension of infrastructure into previously unserved areas. Additionally, similar to the 2004 Housing Element and 2009 Housing Element, no substantial change in the workers to household ratio that would be attributable to 2004 or 2009 Housing Element policies would be expected to occur between 2005 and 2020, no impact to the jobs/housing balance would occur.

2004 Housing Element Comparison

Alternative B promotes density to a lesser extent than the 2004 Housing Element. Therefore, impacts due to increased density would be less. However, similar to the 2004 Housing Element, residential development in the City would occur regardless of Alternative B. Alternative B, while allowing for growth, may make it difficult to meet the need for housing at all income levels as outlined in the most current RHNA due to the differences in the promotion of density. This impact would be greater than under the 2004 Housing Element.

Similar to the 2004 Housing Element, Alternative B encourages housing on public lands and in secondary units and would also promote housing opportunities that would avoid displacement of existing or affordable housing. Similar to the 2004 Housing Element, Alternative B encourages new housing in Downtown and in underutilized commercial and industrial areas. The 2004 Housing Element also encourages increased housing in neighborhood commercial districts and mixed use districts near Downtown. Impacts created by increases in population and housing would be the same as under the 2004

Housing Element. The purpose of the 2004 Housing Element is to address housing supply; housing retention; housing condition; housing affordability; housing choice; homelessness; housing density, design, and quality of life; and regional and state housing needs. Significant impacts with regard to population and housing are due to growth inducement or displacement. Although Alternative B could promote housing, it would not increase housing supply to the extent that would occur under the 2004 Housing Element and would therefore result in fewer impacts to growth inducement. However, Alternative B might not meet the need for housing at all income levels; therefore, impacts under Alternative B to housing supply would be greater than under the 2004 Housing Element, although still ***less than significant***.

2009 Housing Element Comparison

Housing development under Alternative B would be less than under the 2009 Housing Element. Therefore, impacts due to increased density would be less. However, similar to the 2009 Housing Element, residential development in the City would occur regardless under Alternative B. Alternative B while allowing for growth, may not meet the need for housing at all income levels as outlined in the most current RHNA. This impact would be greater than under the 2009 Housing Element.

The 2009 Housing Element encourages housing in all new commercial or institutional projects, near major transit lines, and through community planning efforts. The purpose of the 2009 Housing Element is to address adequate housing sites; increase density around transit lines, and allow for the expansion of building envelopes for projects providing affordable family-size units. Significant impacts with regard to population and housing are due to growth inducement or displacement. Although Alternative B could promote housing, it would not increase housing supply to the extent that would occur under 2025 cumulative conditions and would therefore result in fewer impacts to growth inducement. However, Alternative B would not ensure adequate housing sites to the extent that would occur under the 2009 Housing Element and this impact would be greater than under the 2009 Housing Element, although still ***less than significant***.

Cultural Resources

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements Alternative B could result in a substantial adverse change to a historical resource by promoting inappropriate alterations and/or additions, inappropriate new construction, and demolition by neglect. Similar to the proposed 2004 and 2009 Housing Elements, Alternative B would not directly result in the construction of residential units, but it could direct housing to locations where residential growth is appropriate, promote the retention of existing housing, and encourage provision of affordable housing in accordance with the City's needs. This could result in inappropriate alterations, additions, or new construction. In addition to impacts to individual properties, cumulative impacts could arise in these areas over the course of time thereby diminishing the historic significance of the area.

However, similar to the 2004 and 2009 Housing Elements, under Alternative B new construction, alterations, and demolitions would be required to undergo environmental review to determine any impacts to historic resources.. Potential impacts from demolition of historic buildings under Alternative B could be incrementally greater than under the 2004 Housing Element, which could be a potentially significant impact. The 2004 Housing Element promotes increased density more so than Alternative B, which could lead to an increase in inappropriate additions more so than Alternative B. However, Alternative B does not include some 2004 Housing Element implementation measures promoting adaptive reuse and historic preservation. Impacts to landmark and historic buildings would be the same under Alternative B as under the 2004 Housing Element and Alternative B would retain some 2004 Housing Element policies encouraging the preservation and adaptive reuse of older buildings, such as encouraging consistency with historic districts and the strengthening of an area's sense of history. Overall, Alternative B would result in smaller/less dense residential projects and would retain some policies from the 2004 Housing Element that support historic preservation; therefore, similar to the 2004 and 2009 Housing Elements these impacts would remain ***less than significant***.

Similar to the 2004 and 2009 Housing Elements, Alternative B could result in a substantial adverse change to an archeological or paleontological resource by increasing potential to result in deep foundations or soil improvements, soils disturbance, or directing housing to areas with high potential for archeological deposits near the existing surface. Because Alternative B does not promote increased density as aggressively as the 2004 Housing Element, Alternative B could result in fewer impacts related to the substantial adverse change to archaeological or paleontological resources by decreasing the potential to require deep foundations or soil improvements, soils disturbance, or directing housing to areas with high potential for archeological deposits near the existing surface. However, Alternative B promotes density more aggressively Citywide than the 2009 Housing Element, which could incrementally increase the potential for impacts related to the substantial adverse change to archaeological or paleontological resources. Overall, Alternative B would result in a reduced impact to archaeological and paleontological resources compared to the 2004 Housing Element and could potentially increase impacts compared to the 2009 Housing Element, though impacts would still remain ***less than significant***.

Similar to the 2004 and 2009 Housing Elements, Alternative B would have the potential to disturb human remains. This impact would be incrementally reduced due to the smaller/less dense housing units that could potentially be constructed. Overall, impacts to cultural resources under Alternative B would be similar to the 2004 and 2009 Housing Elements, although still ***less than significant***.

Transportation and Circulation

2004 and 2009 Housing Elements Comparison

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
Policies Related to Directing Growth to Specific City Areas	Policy 1.1: Encourage higher residential density in areas adjacent to Downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households. ~~Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood scale and character where there is neighborhood support.~~	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.
		Policy 2.2: Encourage higher residential density in areas adjacent to Downtown, in underutilized commercial and industrial areas proposed for conversion to housing and in neighborhood commercial districts where higher density will not have harmful effects, especially if the higher density provides a significant number of units that are affordable to lower income households.
	~~Policy 1.2: Encourage housing development, particularly affordable housing, in neighborhood commercial areas without displacing existing jobs, particularly blue-collar jobs or discouraging new employment opportunities.~~	No corresponding Policy
	~~Implementation Measure 1.1.1: A Citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed-use residential development in transit-rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in Downtown areas or through a Better Neighborhoods type planning process; pedestrian-oriented improvements to enhance the attractiveness and use of transit.~~	No corresponding Implementation Measure
	~~Implementation Measure 1.2.1: The Planning Department will develop proposals in neighborhood commercial districts (NCDs) well served by transit to strengthen their functions as a traditional "town center" for the surrounding residential districts.~~	No corresponding Implementation Measure

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Policy 1.3: Identify opportunities for housing and mixed-use districts near Downtown and former industrial portions of the City.	Policy 1.2 Facilitate the conversion of underused industrial and commercial areas to residential use, giving preference to permanently affordable housing uses.
	Implementation Measure 1.3.1: ~~Downtown areas and areas subject to a Better Neighborhoods type planning process will be expected to absorb major office and residential developments over the next decade. Planning and zoning code changes should include floor-to-area ratio exemptions~~. These development bonuses would be conferred only in cases where in return the development will provide major public benefits to the community.	No corresponding Implementation Measure
	Implementation Measure 1.3.2: The Planning Department will introduce zoning changes in the traditionally industrial eastern parts of the City. The areas under study are: Mission, South of Market, Showplace Square/Potrero Hill, Bayview Hunter's Point, and Visitacion Valley. Housing, especially affordable housing, will be encouraged in former industrial areas where residential neighborhoods are established and urban amenities are in place or feasible.	No corresponding Implementation Measure, although Map 1 of the 1990 Residence Element depicts Housing Opportunity Areas, which generally cover the same areas mentioned in Alternative B Implementation Measure 1.3.2.
	Implementation Measure 1.6.1: The Planning Department will review the following incentives for commercial project developments in the Downtown C-3 District: Floor-to-area ratio (FAR) exemption for housing; ~~no residential parking requirement, and no density requirements for residential projects.~~ Housing in excess of the base FAR in the Downtown General (C-3-G) and Downtown Support (C-3-S) Districts has also been proposed by the Board of Supervisors.	No corresponding Implementation Measure

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Implementation Measure 1.6.2: ~~The Planning Department and the Redevelopment Agency will propose increasing height limits, eliminating density requirements and modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey area will be re-zoned to include mixed-use residential areas and reduced residential parking requirements.~~	No corresponding Implementation Measure
	Implementation Measure 1.6.4: The planning Department will update the Land Use Element to define areas for mixed-used development focused along transit corridors that are determined to be served by sufficient and reliable transit.	No corresponding Implementation Measure
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower-income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower-income households.
	Implementation Measure 1.8.1: The Board of Supervisors has introduced Planning Code amendments to allow secondary units in new buildings that are in close proximity to neighborhood commercial districts and public transit.	No corresponding Implementation Measure
	Policy 1.9: Require new commercial developments and higher educational institutions to meet the housing demand they generate, particularly the need for affordable housing for lower income workers.	Policy 1.7: Obtain assistance from office developments and higher educational institutions in meeting the housing demand they generate, particularly the need for affordable housing for lower income workers and students.
	Implementation Measure 1.9.2: Institutions are required to have an Institutional Master Plan that conforms to the General Plan. The Planning Department will evaluate higher educational institution's student housing programs through the required Institutional Master Plan.	No corresponding Implementation Measure

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Implementation Measure 2.4.2: As part of the Planning Department's current citywide action plan, planning efforts in the eastern neighborhoods of the City, where housing exists in commercial and industrially zoned districts, should address housing retention as new policies and zoning are established. Mixed use should be encouraged where appropriate.	No corresponding Implementation Measure
	Implementation Measure 8.6.1: The City will continue to encourage and support the development of specialized housing types that meet the particular needs of various user groups. This housing will be especially encouraged in transit rich areas of the City, maximizing mobility and accessibility to services.	No corresponding Implementation Measure
	Implementation Measure 11.1.1: ~~The new Land Use Element will identify in-fill sites appropriate for mixed-use residential projects. Appropriate neighborhood serving retail, public facilities and supportive amenities should be encouraged.~~	No corresponding Implementation Measure
	Implementation Measure 11.4.2: The City will work to require institutions to provide housing for workers and students.	No corresponding Implementation Measure
	Policy 11.6: ~~Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in Downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.~~	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Implementation Measure 11.6.1: ~~The City will continue to promote increased residential densities in areas well served by transit and neighborhood compatible development with the support and input from local neighborhoods.~~	No corresponding Implementation Measure
	Implementation Measure 11.9.1: ~~The City, through a Better Neighborhoods type planning process, will continue to work to improve and enhance housing with the goal of more housing and vital, attractive transit served neighborhoods.~~	No corresponding Implementation Measure

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Implementation Measure 11.9.3: ~~The new Land Use Element will, within the framework of a comprehensive citywide action plan (CAP), identify areas where higher densities are appropriate.~~	No corresponding Implementation Measure
Parking-related policies	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	No corresponding Policy
	Policy 11.7: ~~Where there is neighborhood support, reduce or remove minimum parking requirements for housing, increasing the amount of lot area available for housing units.~~	No corresponding Policy
	Implementation Measure 1.1.1: ~~A citywide action plan (CAP) should provide a comprehensive framework for the allocation of higher density, mixed user residential development in transit rich areas with stable urban amenities in place. In these areas, specific CAP strategies should include: higher densities and reduced parking requirements in Downtown areas or through a Better Neighborhoods type planning process; pedestrian oriented improvements to enhance the attractiveness and use of transit.~~	No corresponding Implementation Measure
	Implementation Measure 1.6.1: The Planning Department will review the following incentives for commercial project developments in the Downtown C-3 District; Floor-to-area ratio (FAR) exemption for housing; ~~no residential parking requirements, and no density requirement for residential projects~~. Housing in excess of the base FAR in the Downtown General (C-3-G) and Downtown Support (C-3-S) Districts has also been proposed by the Board of Supervisors.	No corresponding Implementation Measure

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Implementation Measure 1.6.2: ~~The Planning Department and the Redevelopment Agency will propose modifying off-street parking requirements in the Transbay/Rincon Hill Redevelopment survey areas. The Mid-Market redevelopment survey areas will be re-zoned to include mixed-use residential areas and reduced residential parking requirements.~~	No corresponding Implementation Measure
	Implementation Measure 1.8.3: The Planning Department will study the impacts of relaxing parking requirements for secondary units located in all neighborhoods.	No corresponding Implementation Measure
	Implementation Measure 4.4.1: Until the Planning Department establishes uniform requirements for affordable and senior housing development, affordable and senior housing projects will continue to be granted reduced parking requirements on a case-by-case basis.	No corresponding Implementation Measure
	Implementation Measure 4.4.2: The Planning Department will investigate appropriate parking requirements for all affordable or senior housing projects.	No corresponding Implementation Measure
	Implementation Measure 11.7.1: ~~The Planning Department will work to reduce parking requirements in older neighborhoods and in other areas through a Better Neighborhoods type planning process with the support and input from local neighborhoods.~~	No corresponding Implementation Measure
	Implementation Measure 11.8.1: ~~The Planning Department, with the support and input from local neighborhoods, will study the impacts of reduced parking and private open space provisions and will consider revising the Planning Code accordingly.~~	No corresponding Implementation Measure
Policies Related to Encouraging Residential Density	Objective 4: Support affordable housing production by increasing site availability and capacity.	Objective 7: To increase land and improve building resources for permanently affordable housing.
	Policy 4.4: Consider granting density bonuses and parking requirement exemptions for the construction of affordable housing or senior housing.	Policy 7.3: Grant density bonuses for the construction of affordable or senior housing.

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Policy 11.6: ~~Employ flexible land use controls in residential areas that can regulate inappropriately sized development in new neighborhoods, in Downtown areas and in other areas through a Better Neighborhoods type planning process while maximizing the opportunity for housing near transit.~~	Policy 12.5: Relate land use controls to the appropriate scale for new and existing residential areas.
	Policy 11.9: ~~Set allowable densities and parking standards in residential areas at levels that promote the City's overall housing objectives while respecting neighborhood scale and character.~~	Policy 2.1: Set allowable densities in established residential areas at levels which will promote compatibility with prevailing neighborhood character.
	Implementation Measure 1.7.1: ~~In response to the increasing number of families in San Francisco, the Planning Department will develop zoning amendments to require a minimum percentage of larger family units ranging from two to four bedrooms, in new major residential projects. The Planning Department will also propose eliminating density requirements within the permitted building envelopes in Downtown areas and areas subject to a Better Neighborhoods type planning process to maximize family units constructed.~~	No corresponding Implementation Measure
	Policy 1.8: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.	Policy 1.5: Allow new secondary units in areas where their effects can be dealt with and there is neighborhood support, especially if that housing is made permanently affordable to lower income households.
	Implementation Measure 4.4.1: The Planning Department will look at establishing uniform density bonus standards and equal requirements for affordable and senior housing development. Until then, affordable and senior housing projects will continue to be granted density bonuses and reduced parking requirements on a case-by-case basis.	No corresponding Implementation Measure

Table VII-2
Comparison of 1990 Residence Element and Alternative B Objectives, Policies, and Implementation Measures That Could Affect the City Transportation Network

Impact	Alternative B	Corresponding 1990 Residence Element
	Implementation Measure 11.7.1: ~~The Planning Department will work to reduce parking requirements in older neighborhoods and in other areas through a Better Neighborhoods type planning process with the support and input from local neighborhoods.~~	No corresponding Implementation Measure
	Implementation Measure 11.8.1:~~- The Planning Department, with the support and input from local neighborhoods, will study the impacts of reduced parking and private open space provisions and will consider revising the Planning Code accordingly.~~	No corresponding Implementation Measure

Notes: [1] The policies in this Table are not exhaustive and, where necessary, this TIS also addresses potential physical environmental impacts associated with the objectives, implementation measures, and strategies in the Housing Elements and project Alternatives.

[2] The Housing Elements and Alternatives contain additional themes beyond what is presented in this Table. However, those themes, which include (but are not limited to) Homelessness, Housing Condition, Seismic Safety, and Displacement, do not have associated policies that could result in potential environmental impacts.

Growth in Certain Areas

Similar to the 2004 Housing Element, Alternative B includes additional policies that would direct growth to certain areas of the City, although to a lesser degree than the 2004 Housing Element. Implementation Measures 1.3.2, 1.6.1, 2.6.4, 1.8.1, 1.9.2, 2.4.2, 8.6.1, and 11.4.2 would all result in directing growth to certain areas of the City. Policies that were removed from the 2004 Housing Element in development of Alternative B pertain to directing new development to transit-rich areas of the city, neighborhood commercial districts, Downtown and mixed-use areas. Therefore, Alternative B does not as aggressively promote housing growth in proximity to job cores, commercial areas, and areas served by transit. It is therefore anticipated that under Alternative B, less future growth would occur in proximity to job cores, services and/or along transit lines as compared to the 2004 Housing Element. The 2009 Housing Element contains policies that would direct growth to community planning areas and areas near transit (2009 Housing Element Policies 1.6, 1.7, 4.6, 12.1, 12.2, 13.1 and Implementation Measures 6, and 14). As discussed in the analysis of the 2004 and 2009 Housing Elements, policies that promote development close to jobs and services and/or along transit lines are intended to reduce citywide vehicle trips and promote alternative modes of transportation, including transit, bicycling and walking. Without these policies, it is more likely that the 37 intersections anticipated to operate at unacceptable levels of service under future 2025 Cumulative Conditions would continue to operate unacceptably.

Alternative B would not promote residential growth in proximity to job cores, commercial areas, and along transit lines as aggressively as the 2004 and 2009 Housing Elements. Alternative B could result in some portion of future trips shifting to transit, although not as many trips as the 2004 and 2009 Housing

Elements might. The analysis of the 2004 and 2009 Housing Elements found that impacts to transit would be potentially significant under Cumulative Conditions. Policies that were not deleted under Alternative B include policies that advocate for zoning changes in many areas of the City that have undergone area planning processes, measures that call for rezoning of the City's industrial and commercial districts to provide mixed use neighborhoods, and encouraging housing along transit for specialized housing types. Therefore, it is possible that encouraging housing in mixed use districts and in industrial and commercial districts where either housing is located in proximity to jobs, services and/or transit could potentially shift some trips to transit. Given that Alternative B could potentially encourage increases in transit ridership, potentially above Muni's capacity utilization standard of 85 percent, and that SFMTA's fiscal emergencies may not allow for expanded transit service, Alternative B may result in a potentially significant impact on the City's transit system.

Parking Provisions

Alternative B does not contain any policies that would modify parking impacts. Therefore, Alternative B would have similar impacts as the No Project Alternative with respect to parking provisions. Alternative B retains two parking policies that commit the City to study the effects of parking requirements for secondary units and affordable housing. Therefore, Alternative B does not contain any policies that could result in reduced parking requirements. As discussed in the TIS, a reduced parking requirement is a strategy to shift modes of transportation to transit, bicycling or walking. It is therefore, anticipated that maintaining the current parking provisions would increase the number of vehicle trips citywide, above those anticipated for the 2004 and 2009 Housing Elements, but not in excess of those anticipated under future 2025 Cumulative Conditions. Therefore, it is more likely that the 37 intersections anticipated to operate at unacceptable levels of service under future 2025 Cumulative Conditions would continue to operate unacceptably. No changes are anticipated to the transit system under 2025 Cumulative Conditions because Alternative B does not include reduced parking provisions.

Residential Density Provisions

Alternative B is similar to the No Project Alternative in that it does not as aggressively promote increased residential density as the 2004 Housing Element. Alternative B includes Policies 2.2 and 2.3 from the 2004 Housing Element that could increase residential density more generally throughout the City as compared to the 2009 Housing Element policies that generally limit this strategy to affordable housing and through community planning processes. As discussed in the TIS, increased residential density is correlated with reduced auto ownership and reduced VMT, resulting in overall beneficial impacts to the City transportation network. Therefore, the 2004 Housing Element would result in more beneficial impacts to the City transportation network than Alternative B, and similar impacts to the transportation network as the 2009 Housing Element policies. Housing policies under Alternative B that would increase residential density could also promote the use of alternative transportation, shifting a portion of trips to transit. However, under Alternative B, impacts to the City's transit system would be similar to the No Project Alternative and would not be anticipated to affect future 2025 Cumulative transit conditions.

Conclusion

As discussed above, Alternative B can be expected to result in an overall increase in citywide vehicle trips as compared to the 2004 and 2009 Housing Elements because Alternative B does not promote the use of alternative transportation to the degree that the 2004 and 2009 Housing Elements do. However, the effects of future development on the roadway network would not be expected to exceed 2025 Cumulative Conditions. Furthermore, Alternative B does not propose any new residential development, and would therefore, not generate any new person trips.

Alternative B does contain policies that direct growth towards job cores, commercial areas and/or transit more so than the No Project Alternative, but not as aggressively as the 2004 and 2009 Housing Elements. Under 2025 Cumulative Conditions, the California and Subway transit corridors are anticipated to operate near Muni's transit capacity utilization in 2025. Although Alternative B would not add any new trips under 2025 Cumulative Conditions, Alternative B contains policies that encourage a mode shift to transit. A substantial mode shift to transit could adversely affect the public transit system. Given that Alternative B includes policies that could potentially encourage increases in transit ridership above Muni's capacity utilization standard of 85 percent, and that SFMTA's fiscal emergencies may not allow for expanded transit service, Alternative B may result in a potentially significant impact on the City's transit system.

Noise

Similar to the 2004 Housing Element and 2009 Housing Element, the City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. Therefore, Alternative B would have ***no impact*** with respect to airport noise.

2004 Housing Element Comparison

Unlike the 2004 Housing Element, Alternative B would not promote as much increased housing density, potentially resulting in less housing construction. This reduced amount of housing construction would result in less noise-generating activity associated with new housing construction. Similar to the 2004 Housing Element, Alternative B would not result in an increase in demolition, which would create demolition-related noise. Both Alternative B and 2004 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. Therefore, similar to the 2004 Housing Element, impacts from exposure of people to or generation of excessive groundborne vibration or groundborne noise would be less than significant.

Alternative B would reduce the amount of housing construction on in-fill sites in industrial and commercial areas as compared with the 2004 Housing Element. This would reduce the potential for exposing residents to higher noise levels associated with these types of non-residential uses; therefore, this impact would be incrementally less than under the 2004 Housing Element. However, as with the 2004 Housing Element, compliance with Title 24 may not mitigate exterior noise on private open space or other site-specific conditions may warrant acoustical monitoring and analysis beyond that required for Title 24 compliance. Therefore, as with the 2004 Housing Element, Alternative B would result in significant impact with respect to exposing noise sensitive receptors to noise levels in excess of established standards and promoting residential development that may be substantially affected by existing noise levels. Compliance with Mitigation Measure M-NO-1 would reduce Alternative B's impact on noise sensitive receptors to ***less than significant with mitigation***, similar to the 2004 Housing Element.

However, infill areas were designated through the Eastern Neighborhoods planning process and any reduction attributable to the 2004 Housing Element would be minimal. Additionally, traffic generated noise impacts under Alternative B would be incrementally less due to the reduction in traffic-generated noise. Alternative B would result in less exposure of people to non-residential noise sources due to the reduced promotion of density. Overall, these impacts would be less than noise impacts under the 2004 Housing Element, and would remain ***less than significant with mitigation.***

2009 Housing Element Comparison

Unlike the 2009 Housing Element, Alternative B would not promote as much increased housing density and, therefore, housing construction. This reduced amount of housing construction would result in less noise-generating activity associated with new housing construction. Similar to the 2009 Housing Element, Alternative B would not result in an increase in demolition, which would create demolition-related noise. Both Alternative B and the 2009 Housing Element recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy.

Alternative B would promote housing construction in Downtown and other areas through floor-to-area ratio exemptions, which could increase density in these specific areas and increase construction-related noise and expose more residents to traffic and stationary noise sources. Similar to the 2009 Housing Element, Alternative B would consider public health objectives when designating housing sites. Therefore, Alternative B would not expose more people to excessive groundborne vibration or noise or would locate residential uses near site unsuitable for housing. Additionally, traffic generated noise impacts under Alternative B would be incrementally less due to the reduction in traffic-generated noise. Alternative B could result in less exposure of people to non-residential noise sources due to the reduced promotion of density.

However, as with the 2009 Housing Element, compliance with Title 24 may not mitigate exterior noise on private open space or other site-specific conditions may warrant acoustical monitoring and analysis beyond that required for Title 24 compliance. Therefore, as with the 2009 Housing Element, Alternative B would result in significant impact with respect to exposing noise sensitive receptors to noise levels in excess of established standards and promoting residential development that may be substantially affected by existing noise levels. Compliance with Mitigation Measure M-NO-1 would reduce Alternative B's impact on noise sensitive receptors to ***less than significant with mitigation***, similar to the 2009 Housing Element. Overall, these impacts would be less than noise impacts under the 2009 Housing Element, and would remain ***less than significant with mitigation.***

Air Quality

2004 and 2009 Housing Element Comparison

Consistency of the proposed Housing Elements with regional air quality plans can be determined by comparing the growth factors used for the proposed Housing Element with those used in the most recently adopted regional air quality plan, the Bay Area 2005 Ozone Strategy. The 2005 Ozone Strategy growth assumptions for Bay Area communities are based on ABAG's Projections. The Housing Elements are based on regional growth projections provided by the AGAG. This RHNA, in turn, is based on ABAG population projects. As both the 2004 and 2009Housing Elements and the 2005 Ozone Strategy utilize ABAG projections, the2004 and 2009Housing Elements would not result in a significant impact on regional air quality planning efforts.

Although the 2004 and 2009 Housing Elements would not result in the construction of residential units, 2004 and 2009 Housing Elements policies could contribute to an existing or projected air quality violation by promoting increased density in certain areas of the City, thereby consolidating new construction within those areas. Alternative B would not promote increased density to the same degree as the 2004 and 2009 Housing Elements. Increased density standards under the 2004 and 2009 Housing Elements could promote longer construction durations associated with construction of buildings containing a greater number of units, which could result in an increase in construction emissions for the construction project. Therefore, impacts from construction emissions would be incrementally reduced under Alternative B.

However, as Alternative B would encourage fewer housing units near transit than either the 2004 or 2009 Housing Elements and could therefore, result in incrementally greater impacts to air quality, including CO concentrations due to an increase in Vehicle Miles Traveled. Similar to the 2004 or 2009 Housing Elements, Alternative B would not expose residents to TACs because all future housing units would be required to undergo review of new housing projects consider the location of industrial sites or other sources of air pollution in the design of the residential building, to orient air intake away from the sources of pollution. Similar to the 2004 and 2009 Housing Elements, Alternative B would encourage the construction of housing and would not result in the creation of objectionable odors. Overall, impacts to air quality under Alternative B could be incrementally greater than under the 2004 and 2009 Housing Elements due to potential increases in Vehicle Miles Traveled. However, this impact would still be ***less than significant***.

Greenhouse Gases

2004 Housing Element Comparison

Both Alternative B and the 2004 Housing Element include policies that would ultimately result in reduced GHG emissions by encouraging: (1) housing in proximity to job cores, neighborhood services, and/or transit; (2) increased housing density; (3) infill development; (4) preservation of existing housing stock; and (5) energy efficiency. However, Alternative B would result in smaller/less dense projects and would therefore not result in the same energy savings as the 2004 Housing Element. Therefore, given that

Alternative B would not reduce GHG to the same extent as the 2004 Housing Element, this impact could be incrementally greater than under the 2004 Housing Element.

2009 Housing Element Comparison

Both Alternative B and the 2009 Housing Element include policies that would ultimately result in reduced GHG emissions. These policies include providing housing: (1) in proximity to job cores, neighborhood services, and/or transit; (2) by increasing housing density; (3) encouraging infill development; (4) preservation of existing housing stock or adaptive reuse of existing buildings; and (5) promoting energy efficiency. Each of these strategies could result in GHG emissions reductions. However, Alternative B would not promote increased density to the same extent as the 2009 Housing Element. Both Alternative B and the 2009 Housing Element include policies that promote infill development, preservation the City's existing housing stock, and energy efficiency of new development. Therefore, overall impacts from Alternative B could be incrementally greater than the 2009 Housing Element, although ***less than significant***.

Wind and Shadow

2004 and 2009 Housing Elements Comparison

Alternative B promotes density to a lesser degree than the 2004 and 2009 Housing Elements. Additionally, Alternative B could result in the construction of smaller buildings. However, height limits would remain under the 2004 and 2009 Housing Elements and this impact would only potentially be incrementally smaller. However, wind impacts are project-specific and projects would be subject to the Planning Department's procedures requiring modification of any new building or addition that exceeds the wind or criterion. New residential units would comply with the applicable federal, state, and local regulations including Sections 147, 148, 243(c)(9), 249.1(b)(2), and 263.11(c) of the San Francisco Planning Code. Therefore, this impact would be the same as the 2004 and 2009 Housing Elements and would be ***less than significant*** impact with respect to the alteration of wind patterns.

Alternative B encourages density to a lesser extent, which could result in lower building heights in certain areas the 2004 and 2009 Housing Elements. However, shadow impacts are project-specific and all applications for new construction or additions to existing buildings above 40 feet in height are reviewed by the Planning Department to determine whether such shading might occur if a project would result in new shadow, that shadow is evaluated for significance under CEQA. Furthermore, new residential units would comply with the applicable federal, state, and local regulations including Sections 146(a), 146(c), and 295 of the San Francisco Planning Code. Therefore, this impact would be the same as the 2004 and 2009 Housing Elements and would have a ***less than significant*** impact with respect to the creation of new shadows.

Recreation

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative B would not directly increase the use of recreational facilities because it would not directly result in population growth. However, the potential for secondary effects resulting from new housing related to physical deterioration of recreation facilities resulting from population increases and/or use attributable to the proposed projects could occur under Alternative B. The City currently has a ratio of 7.0 acres of open space per 1,000 San Francisco residents and the City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Alternative B would not generate new development. Many open space acquisitions/expansions have been identified by the Planning Department and San Francisco Recreation and Park Department, independent of Alternative A and the proposed Housing Elements. Furthermore, SFRPD would continue to acquire new open space/recreation facilities pursuant to Proposition C. New development would be required to comply with Planning Code requirements for open space.

2004 Housing Element Comparison

Alternative B itself does not propose any recreational facilities. Alternative A would not directly increase the use of recreational facilities because it would not directly result in population growth. The City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Therefore, the City would not be required to provide or construct additional recreational facilities in response to any population growth.

Alternative B could result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, or could create the need for new facilities. Unlike the 2004 Housing Element Policy 11.8.1, which calls for studying reduced private open space and potential revisions to the Planning Code, Alternative B does not propose to allow reductions to private open space requirements. Reductions in private open space increase the potential for greater use of public recreation facilities, accelerating deterioration or creating the need for new facilities. Any such impacts under Alternative B therefore would be expected to be incrementally less than under the 2004 Housing Element. Moreover, any specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. Therefore, similar to the 2004 Housing Element, impacts related to increased use or the construction or expansion of recreational facilities would be ***less than significant***.

2009 Housing Element Comparison

The 2009 supports more limited consideration of reductions to required open space than the 2004 Housing Element, and contains policies and implementation measures that would serve to discourage such reductions in areas that are currently underserved with recreational facilities. Therefore, the impacts of Alternative A would be expected to be similar to the 2009 Housing Element with regard to increased use of parks resulting in deterioration or the need for new facilities. Alternative A itself does not propose any recreational facilities. Alternative A would not directly increase the use of recreational facilities because it would not directly result in population growth. The City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Therefore, the City would not be required to provide or construct additional recreational facilities in response to any population growth. Specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. Similar to the 2009 Housing Element, impacts related to increased use of parks and recreational facilities, or the construction or expansion of recreational facilities would be ***less than significant***.

Recreation

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative B would not directly increase the use of recreational facilities because it would not directly result in population growth. However, the potential for secondary effects resulting from new housing related to physical deterioration of recreation facilities resulting from population increases and/or use attributable to the proposed projects could occur under Alternative B. The City currently has a ratio of 7.0 acres of open space per 1,000 San Francisco residents and the City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Alternative B would not generate new development. Many open space acquisitions/expansions have been identified by the Planning Department and San Francisco Recreation and Park Department, independent of Alternative B and the proposed Housing Elements. Furthermore, SFRPD would continue to acquire new open space/recreation facilities pursuant to Proposition C. New development would be required to comply with Planning Code requirements for open space.

2004 Housing Element Comparison

Alternative B itself does not propose any recreational facilities. Alternative B would not directly increase the use of recreational facilities because it would not directly result in population growth. The City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. However, the City has adopted requirements for the payment of impact fees to provide parks and recreation facilities in designated areas throughout the City. New housing development could include recreational facilities or require the construction or expansion of recreational facilities in order to comply with the City's Planning Code. Specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review.

Implementation of Alternative B could result in impacts related to an adverse physical effect on the environment due to the construction or expansion of recreational facilities in underserved areas, potentially requiring new or expanded facilities. Unlike the 2004 Housing Element Policy 11.8.1, which calls for studying reduced private open space and potential revisions to the Planning Code, Alternative B does not propose to allow reductions to private open space requirements. Reductions in private open space increase the potential for greater use of public recreation facilities, accelerating deterioration or creating the need for new facilities. Any such impacts under Alternative B therefore would be expected to be incrementally less than under the 2004 Housing Element. Alternative B itself does not propose any recreational facilities. However, new housing development might include recreational facilities. Any specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. Housing development under Alternative B would be reduced from what could occur under the 2004 Housing Element. Therefore, although this impact would be reduced from what could occur under the 2004 Housing Element, similar to the 2004 Housing Element, this impact would be ***less than significant***.

2009 Housing Element Comparison

Implementation of Alternative B could result in impacts related to an adverse physical effect on the environment due to the construction or expansion of recreational facilities in underserved areas, potentially requiring new or expanded facilities. Alternative B itself does not propose any recreational facilities. However, new housing development could include recreational facilities or require the construction or expansion of recreational facilities in order to comply with the City's Planning Code. Specific proposals for the development of park space or recreation facilities would be subject to subsequent project-level environmental review. Impacts under Alternative B would be incrementally reduced compared to the 2009 Housing Element due to 2009 Housing Element policies that allow for reduced open space on project sites. Housing development under Alternative B would be reduced from what could occur under the 2009 Housing Element. Therefore, although this impact would be reduced from what could occur under the 2009 Housing Element, similar to the 2009 Housing Element, this impact would be ***less than significant***.

Utilities and Service Systems

The City requires NPDES permits, as administered by the SFBRWQCB, according to federal regulations for both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the United States. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. New construction could result in impacts related to water or wastewater treatment facilities if new housing would results in additional need for water or wastewater treatment in areas that do not have the available capacity to transport or process the additional water or wastewater. This could require the construction or expansion of water or wastewater treatment facilities. Although the 2004 Housing Element and 2009 Housing Element would not directly result in the construction of residential units, all new development would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Therefore, the proposed Housing Elements would not result in an exceedance of wastewater treatment requirements. Additionally, the NPDES Phase I and Phase II requirements would regulate discharge from construction sites. All new development would be required to comply with all applicable wastewater discharge requirements issued by the SWRCB and RWQCB and would not exceed applicable wastewater treatment requirements of the RWQCB with respect to discharges to the sewer system or stormwater system within the City. Therefore, similar to the 2004 and 2009 Housing Element, Alternative B would have ***no impact*** with respect to the exceedance of wastewater treatment requirements.

According to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. As of 2006, the most recent year for which Board-reviewed rates are available, the City achieved a diversion rate of 70 percent. Additionally, City policies (including Chapter 19, "Mandatory Recycling and Composting Ordinance") require all persons located in San Francisco to separate recyclables, compostables and landfilled trash and participate in recycling and composting programs and provide enforcement mechanisms and penalties for violations. Diversion is easier form single-family housing as opposed to multi-family housing. However, because any greater density resulting from the 2004 or 2009 Housing Elements would not be focused in single-family neighborhoods, Alternative B would not be expected to change compliance levels with City ordinances. Therefore, similar to the 2004 and 2009 Housing Element, Alternative B would have ***no impact*** related to compliance with solid waste statutes and regulations

2004 and 2009 Housing Elements Comparison

Under Alternative B, construction associated with housing could potentially result in the need for new or expanded water supply resources or entitlements because increased density could result in inadequate water supply. However, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with federal, state, and local regulations, including the City's Green Building Ordinance, Water Supply Availability Study, North Basin Groundwater Management Plan, WSIP, Article 21 of the San Francisco Public Works Code, and the Residential Water Conservation Ordinance. Therefore, impacts to water supply from Alternative B would be similar, but incrementally smaller than the2004 and 2009 Housing Elements due to the decrease in the promotion of density.

Alternative B could encourage the construction of new housing in areas that do not have the available capacity to transport or process the additional water or wastewater. Alternative B encourages density and housing construction to a lesser degree than the2004 and 2009 Housing Elements, potentially resulting in fewer number of people requiring water or wastewater treatment service. Alternative B, like the 2004 and 2009 Housing Elements, would promote housing construction on in-fill sites in industrial and commercial areas, or Downtown, potentially resulting in similar changes in the volume and type of required water or wastewater treatment. Similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Therefore, impacts to wastewater service capacity from Alternative B might be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to a potential decrease in the promotion of density resulting from the differences in policy direction.

Alternative B would result in construction associated with housing could potentially result in an increase of impervious surfaces on sites that could increase the rate of runoff, exceeding the capacity of stormwater drainage facilities. However, this increase in impervious surfaces might be less than under the 2004 and 2009 Housing Elements; therefore, this impact would be incrementally reduced. Alternative B would not increase housing construction to the same extent as the 2004 and 2009 Housing Elements, and would not increase the demand for water supply to the same extent as the 2004 and 2009 Housing

Elements. Additionally, all new development would be required to comply with federal, state, and local regulations, including the City's Green Building Ordinance, Water Supply Availability Study, North Basin Groundwater Management Plan, WSIP, Article 21 of the San Francisco Public Works Code, and the Residential Water Conservation Ordinance. Therefore, impacts from impervious surfaces and water supply from Alternative B would be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to the decrease in housing units.

New housing constructed under Alternative B would require solid waste disposal. Similar to the 2004 and 2009 Housing Elements, additional collection trucks and personnel could be required to provide services to new housing. However, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with the previously discussed state and local regulations, including the City's Green Building Ordinance, Ordinance No. 27-06, and the Mandatory Recycling and Composting Ordinance (all of which contribute to the City's goal of zero waste by 2020). Therefore, impacts to solid waste disposal from Alternative B would be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to the decrease in housing units.

Similar to the 2004 and 2009 Housing Elements, Alternative B would likely achieve increased housing density through the development of multi-family housing, which uses less energy and water than single-family housing. Therefore, impacts to energy usage from Alternative B would be similar, but incrementally greater than the 2004 and 2009 Housing Elements due to the decrease in housing units. Overall, impacts to utilities and service systems would be similar to and ***less than significant*** than the 2004 and 2009 Housing Elements.

Public Services

2004 and 2009 Housing Elements Comparison

Alternative B promotes density to a lesser extent than the 2004 Housing Element because it would result in smaller/less dense projects. New development could potentially result in an increase in the number of people requiring fire protection or police services or a change in the level of service required. Similar to the 2004 and 2009 Housing Elements, Alternative B could result in new housing resulting in a need for additional schools and the SFUSD would not have capacity to accommodate the students in existing facilities, thereby requiring the construction or expansion of school facilities. However, this increase would be incrementally less than under the 2004 and 2009 Housing Elements, which encourage housing to a greater extent than Alternative B and also could potentially direct development to non-residential areas where services may not be located. Additionally, Alternative B could result in the need for public libraries or public health facilities in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of libraries or public health facilities. This impact would be incrementally reduced under Alternative B due to the decreased promotion of density. Therefore, impacts to public services from Alternative B would be similar, but incrementally smaller than the 2004 and 2009 Housing Elements due to the decrease in housing units. Overall, impacts to utilities and services systems from Alternative B would be similar as the 2004 and 2009 Housing Elements and ***less than significant***.

Biological Resources

2004 Housing Element Comparison

Similar to the 2004 Housing Element, Alternative B could result in impacts related to biological resources if new projects result in disturbance from construction activities, tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g. development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan. These impacts would be incrementally reduced under Alternative A due to the reduced number of housing units that would be constructed under this alternative and due to the fact that the 2004 Housing Element actively directs development away from sensitive biological areas. In addition, all housing constructed under Alternative B would be required to comply with the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code, San Francisco's Green Building Ordinance, San Francisco's IPM Ordinance, San Francisco's Tree Protection Ordinance, and San Francisco's Urban Forestry Ordinance, which would further minimize impacts related to biological resources. Overall, impacts to biological resources under Alternative B would be less than under the 2004 Housing Element, but similar to the 2004 Housing Element, would be ***less than significant***.

2009 Housing Element Comparison

Similar to the 2009 Housing Element, Alternative B could result in impacts related to biological resources if new projects result in disturbance from construction activities, tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g., development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan. These impacts would be incrementally reduced under Alternative B due to the reduced number of housing units that would be constructed under this alternative and due to the fact that the 2004 Housing Element actively directs development away from sensitive biological areas. In addition, all housing constructed under Alternative B would be required to comply with the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code, San Francisco's Green Building Ordinance, San Francisco's IPM Ordinance, San Francisco's Urban Forest Plan, and San Francisco's Urban Forestry Ordinance, which would further minimize impacts related to biological resources. Overall, impacts to biological resources under Alternative B would be less than under the 2009 Housing Element, but similar to the 2009 Housing Element, would be ***less than significant***.

Geology and Soils

The San Francisco Bay Area and surrounding areas are characterized by numerous geologically young faults. However, there are no known fault zones or designated Alquist-Priolo Earthquake Fault Zones in the City. Therefore, there would be ***no impact*** with respect to rupture of a known earthquake fault under Alternative B. Additionally, development under Alternative A would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, there would be ***no impact*** with respect to septic tanks or alternative wastewater disposal systems under Alternative B.

2004 Housing Element Comparison

Similar to the 2004 Housing Element, new housing constructed could expose people and structures to geologic risks, including from rupture of a known earthquake fault, groundshaking, ground failure, or liquefaction. Additionally, housing development could be located on expansive or unstable ground, or on or near an earthquake fault, or areas prone to landslides. New housing could also increase density in especially geologically hazardous areas or increase risk for housing units not constructed or maintained in a seismically sound manner. In addition, increasing density, though to a lesser extent under Alternative B, could result in heavier buildings, which could increase the weight on soil beyond what it has previously experienced. However, federal, state, and local regulations have been adopted to reduce impacts from seismic hazards. These regulations include the SFBC, Earthquake Hazards Reduction Act, Alquist-Priolo Earthquake Fault Zoning Act, and Seismic Hazards Mapping Act of 1990. The State of California provides minimum standards for building design through the CBC, including standards that must be met for construction on expansive soils. Additionally, this impact might be further reduced under Alternative B compared to the 2004 Housing Element due to the decreased promotion of density if fewer sites and/or smaller buildings are developed. Similar to Alternative B, this impact would be ***less than significant***.

Housing constructed under Alternative B could result in soil erosion through the need for grading activities. All new development would be required to comply with federal, state, and local regulations, including State and City Building Codes that include regulations that have been adopted to reduce impacts from grading and erosion. Additionally, this impact would be further reduced under Alternative B due to the decreased promotion of density. Similar to Alternative B, this impact would be ***less than significant***.

Similar to the 2004 Housing Element, Alternative B could require grading activities that have the potential to substantially change the topography or any unique geologic or physical features on project sites. However, grading impacts are project-specific and all grading and building permit applications for new construction or additions to existing buildings would be reviewed by the Planning Department to determine whether grading activities might occur with the potential to substantially change the topography of a project site. Furthermore, as part of the permitting process, construction activities for new residential units would be required to comply with the SFBC regulations related to grading and excavation activities and project design plans would be subject to review by the City's Planning Department for consistency with policies related to land alteration. This impact would be further reduced under Alternative B due to the decreased promotion of density. Similar to Alternative B, this impact would be less than significant. Overall, impacts to geology and soils from Alternative B would be similar as the 2004 Housing Element and ***less than significant***.

2009 Housing Element Comparison

Similar to the 2009 Housing Element, new housing could expose people and structures to geologic risks, including from rupture of a known earthquake fault, groundshaking, ground failure, or liquefaction. Additionally, housing development could be located on expansive or unstable ground, or on or near an earthquake fault, or areas prone to landslides. New housing could also increase density in especially geologically hazardous areas or increase risk for housing units not constructed or maintained in a seismically sound manner. In addition, increasing density, though to a lesser extent under Alternative B, could result in heavier buildings, which could increase the weight on soil beyond what it has previously experienced. However, federal, state, and local regulations have been adopted to reduce impacts from seismic hazards. These regulations include the San Francisco Building Code (SFBC), Earthquake Hazards Reduction Act, Alquist-Priolo Earthquake Fault Zoning Act, and Seismic Hazards Mapping Act of 1990. The State of California provides minimum standards for building design through the CBC, including standards that must be met for construction on expansive soils. Additionally, this impact would be further reduced under Alternative B due to the decreased promotion of density. Similar to Alternative B, this impact would be ***less than significant***.

Housing constructed under Alternative B could result in soil erosion through the need for grading activities. All new development would be required to comply with federal, state, and local regulations, including State and City Building Codes that include regulations that have been adopted to reduce impacts from grading and erosion. Additionally, this impact would be further reduced under Alternative B due to the decreased promotion of density. Similar to Alternative B, this impact would be less than significant.

Similar to the 2009 Housing Element, Alternative B could require grading activities that have the potential to substantially change the topography or any unique geologic or physical features on project sites. However, grading impacts are project-specific and all grading and building permit applications for new construction or additions to existing buildings would be reviewed by the Planning Department to determine whether grading activities might occur with the potential to substantially change the topography of a project site. Furthermore, as part of the permitting process, construction activities for new residential units would be required to comply with the SFBC regulations related to grading and excavation activities and project design plans would be subject to review by the City's Planning Department for consistency with policies related to land alteration. This impact would be further reduced under Alternative A due to the reduced number of housing units that would be constructed. Similar to Alternative B, this impact would be less than significant. Overall, impacts to geology and soils from Alternative B would be similar as the 2009 Housing Element and ***less than significant***.

Hydrology and Water Quality

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, Alternative B would promote increased housing construction and density, potentially resulting in the need for construction activities, increase in demand for wastewater treatment, or increase in the rate or quality of runoff. Additionally, Alternative B could result in construction associated with housing that would potentially alter existing drainage patterns by through grading and construction activities. Because the City is an urban setting and development typically involves the reuse of already developed sites, new construction frequently has no effect on existing drainage patterns. However, the City also has locations with steep slopes and development in these locations can affect drainage patterns. This impact could be incrementally reduced in comparison to the 2004 and 2009 Housing Elements due to the decreased promotion of density. Additionally, similar to the 2004 and 2009 Housing Elements, development under Alternative B would be required to comply with the previously discussed federal, state, and local regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, Water Quality Protection Program, the City's Stormwater Management Plan, the City's Construction Site Runoff Pollution Prevention Program requirements that are described in the City's Construction Site Water Pollution Prevention Program, and forthcoming SFPUC development and redevelopment guidelines. Therefore, similar to the 2004 and 2009 Housing Elements, impacts with respect to violation of any water quality standards, waste discharge requirements, or quality of runoff would be ***less than significant***.

Alternative B would also result in construction of new housing could require dewatering or result in groundwater drawdown. Similar to the 2004 and 2009 Housing Elements, although short-term construction groundwater dewatering may be necessary at certain locations (e.g., for installation of building foundations or underground utilities), dewatering would be regulated by the SFPUC and would have only a minor temporary effect on the groundwater table elevation in the immediate vicinity of the activity, and would not measurably affect groundwater supplies. This impact would be similar to the 2004 and 2009 Housing Elements and ***less than significant***.

Similar to the 2004 and 2009 Housing Elements, new construction would result in the construction of housing in 100-year flood hazard areas that would be subject to or could impede or redirect flood flows. However, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with federal, state, and local regulations. Alternative B would not affect the pipeline or capacity units located in a flood area as shown in Figure V.P-1 and -2. However, if fewer units are constructed overall without the 2004 Housing Element those units might not be located within flood zones. Additionally, new construction could result in impacts related to flooding if housing is placed near above ground reservoirs and tanks. However, the City monitors all reservoirs in the City and is completing a project that will significantly reduce any risks of flooding from the City's reservoirs, including the Sunset Reservoir. Therefore, impacts under Alternative B from dam inundation would be similar to the 2004 and 2009 Housing Elements, and would be ***less than significant***.

New construction under Alternative B could result in impacts related to seiche, tsunami, or mudflow if housing is placed near open water, near bodies of water, or near steep slopes in the City. This impact would be incrementally less under Alternative B than under the 2004 and 2009 Housing Elements due to the smaller number of housing units that would be constructed. In addition, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with the previously discussed federal, state, and local regulations, including the Department of Building Inspection's approval of the final plans for any specific development; therefore, this impact would be less than significant. Overall, impacts to hydrology and water quality from Alternative B would be reduced from the 2004 and 2009 Housing Elements due to the smaller number of housing units and this impact would be ***less than significant***.

Hazards/Hazardous Materials

The City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. Therefore, similar to the 2004 Housing Element or 2009 Housing Element, Alternative B would have ***no impact*** with respect to air safety.

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, Alternative B could stimulate in increased density and/or housing construction, potentially resulting in the increased transport, use, or disposal of hazardous materials. Similar to the 2004 and 2009 Housing Elements, Alternative B encourages new housing in Downtown, in underutilized commercial and industrial areas, neighborhood commercial districts, and mixed use districts. This could result in construction of housing in areas where hazardous materials are used or have been used in the past. However, all new development would be required to comply with federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Additionally, Alternative B could result in incrementally reduced impacts from hazardous materials in comparison to the 2004 and 2009 Housing Elements, if fewer units are constructed in the absence of 2004 and 2009 Housing Elements policy direction. However, similar to the 2004 and 2009 Housing Elements, impacts with respect to the routine transport, use, or disposal of hazardous materials from Alternative B would be ***less than significant***.

Alternative B could result in impacts related to upset and accident conditions because new housing construction could increase transport of hazardous materials for delivery and disposal purposes, which could in turn increase the risk of upset and accident conditions during transport. However, this impact could be reduced indirectly as compared to the 2004 and 2009 Housing Elements due to the reduction in housing units. Additionally, all new development would be required to comply with all applicable federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Therefore, this impact would be incrementally reduced compared to the 2004 and 2009 Housing Elements and similar to the 2004 and 2009 Housing Elements, this impact would be ***less than significant***.

Under Alternative B, housing construction could occur on sites that have been identified as being contaminated from the release of hazardous substances in the soil, including industrial sites, sites containing leaking underground storage tanks, and large and small-quantity generators of hazardous waste. Similar to the 2004 and 2009 Housing Elements, Alternative B encourages new housing in Downtown, in underutilized commercial and industrial areas, neighborhood commercial districts, and mixed use districts. This could result in construction of housing in areas where hazardous materials are used or were used previously. This impact would be less under Alternative B than under the 2004 and 2009 Housing Elements, due to the smaller number of housing units constructed. However, similar to the 2004 and 2009 Housing Elements, impacts related to hazardous waste sites are typically project-specific and projects on Brownfield sites would be subject to the review and/or mitigation by the City's SFDPH and/or the applicable regulator of hazardous waste. Specific mitigation measures would be developed in consultation with the SFDPH based on the real or perceived contaminants that may be onsite. This impact would be similar to the 2004 and 2009 Housing Elements and would be ***less than significant***.

Alternative B could locate residents in areas that would result in congestion of an emergency evacuation route. In the event of a natural disaster, increased congestion could slow an evacuation effort within the City. However, the City's ERP, prepared in April 2008, was developed to ensure allocation of and coordination of resources in the event of an emergency in the City. The existing street grid provides ample access for emergency responders and egress for residents and workers, and similar to the 2004 and 2009 Housing Elements, Alternative B would neither directly nor indirectly alter that situation to any substantial degree.

Additionally, Alternative B could result in impacts related to risk associated with fire if new housing is constructed in near areas with potential for wildland fires or if new housing would include certain features that would put residents or workers at risk. San Francisco ensures fire safety primarily through provisions of the San Francisco Building Code and Fire Code. Existing buildings are required to meet standards contained in these codes. All housing constructed under Alternative B, including high-rise residential buildings up to forty stories, would be required to meet standards for emergency access, sprinkler and other water systems, and other requirements specified in the San Francisco Fire Code. Standards pertaining to equipment access would also be met. Plan review for compliance with San Francisco Fire Code requirements, to be completed by DBI and the SFFD, would minimize fire-related emergency dispatches, reducing the demand for fire protection services in the City. However, this impact would be reduced under Alternative B due to the decreased promotion of density. Similar to the 2004 and 2009 Housing Elements, impacts would be less than significant. Overall, impacts to hazards and hazardous materials from Alternative B would be reduced from the 2004 and 2009 Housing Elements due to the smaller number of housing units and this impact would be mitigated to ***less than significant*** at the project level.

Mineral/Energy Resources

The City is not a designated area of significant mineral deposits and no area within the City is designated as a locally-important mineral resource recovery site. Therefore, there would be ***no impact*** related to the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site.

2004 and 2009 Housing Elements Comparison

Under Alternative B, it is possible that fewer older housing units would be converted to more energy-efficient housing or promoted to a lesser degree than under the 2004 and 2009 Housing Elements, resulting in a decreased uses of fuel, water, and energy associated with demolition. However, both Alternative B and the 2004 and 2009 Housing Elements would include energy efficient features in new development. All new development would be required to comply with the previously discussed federal, state, and local regulations. Therefore, projects constructed under Alternative B would be required to comply with the Environmental Protection Element of the San Francisco General Plan, San Francisco's Green Building Ordinance, San Francisco Residential Energy Conservation Ordinance, and San Francisco Sustainability Plan. New development would also have the opportunity to participate in voluntary programs, such as GoSolarSF and San Francisco's Green Priority Permitting Program. Therefore, similar to the 2004 and 2009 Housing Elements, Alternative B would have a ***less than significant*** impact with respect to the use of large amounts of fuel, water, or energy.

Agricultural Resources

The entire City is identified as Urban and Built-Up Land by the Department of Conservation and does not contain any important farmland. The City does not participate in the Williamson Act Program and no land within City boundaries is under Williamson Act contract. Therefore, under Alternative A there would be no impact related to the direct conversion of Farmland to non-agricultural use, conflict with a Williamson Act contract, or the conversion of Farmland to non-agricultural use due to other changes in the existing environment.

Under Alternative B, there would be no changes to zoning or height and bulk districts. P Districts, which include most of the City's forest and timber resources, would not be at risk for conversion to residential zoning. However, Alternative B could result in impacts related to the loss or conversion of forest land if trees in R districts were removed, damaged, or otherwise physically affected by a new project. However, any project proposed under Alternative B would be required to comply with the San Francisco Tree Protection Ordinance and the required replacement ratios to minimize impacts related to forest resources. Therefore, there would be ***no impact*** related to forest land and timberland zoning or the loss or conversion of forest land.

2004 and 2009 Housing Elements Comparison

The SFRPD supports and manages a program of 40 community gardens on City-owned property. Community gardens are allowed on SFRPD lands zoned P District and allowed in all R (RH, RC, RM) Districts. New housing could include projects built to the maximum allowable height and bulk capacity, which could block sun on plots currently used for urban farming or community gardens or otherwise physically affect community gardens. New housing could also result in development of lots currently used for community gardens. Under Alternative B, there would be no changes to zoning or height and bulk districts and therefore, no new conflicts with existing zoning for agricultural uses. Therefore, impacts under Alternative B would be similar to the 2004 and 2009 Housing Elements and ***less than significant***.

Attainment of Project Objectives

The objectives of the proposed Housing Elements are to provide a vision for the City's housing and growth management through 2014; maintain the existing housing stock to serve housing needs; ensure capacity for the development of new housing to meet the RHNA at all income levels; encourage housing development where supported by existing or planned infrastructure, while maintaining existing neighborhood character; encourage, develop and maintain programs and policies to meet projected affordable housing needs; develop a vision for San Francisco that supports sustainable local, regional and state housing and environmental goals; and adopt a housing element that substantially complies with California housing element law as determined by the California Department of Housing and Community Development.

Alternative B includes the objectives, policies and implementation measures of the 2004 Housing Element minus those policies that were stricken by the court in the appeal of the 2004 Housing Element. Similar to Alternative A, this alternative would use the most recently identified RHNA allocation (which would need to be met) and an updated Data and Needs Analysis.

Alternative B themes focus on increasing housing supply through higher density, encouraging family-sized housing, and reducing parking requirements that would use area that could be used for housing units. The 2004 Housing Element-Adjudicated themes also focus on infill and mixed-use development, affordable housing, and utilization of City-owned vacant or underused sites. In addition, the 2004 Housing Element-Adjudicated encourages new housing in Downtown and encourages increased housing in neighborhood commercial districts and mixed use districts near Downtown.

Although Alternative B includes policies for higher density, encouraging family-sized housing, and reducing parking requirements that would use area that could be used for housing unit, it may not fully address growth management or the RHNA. While Alternative B could meet state requirements, it may not achieve the realization of the allocation as outlined in the most recent RHNA (which addresses growth through 2041) or ensure capacity for the development of new housing to meet the RHNA at all income levels as effectively as the 2004 or 2009 Housing Elements. Meeting the RHNA is a key objective of the proposed Housing Elements. Therefore, Alternative B would not obtain one of the key objectives of the proposed projects.

Alternative C: 2009 Housing Element–Intensified

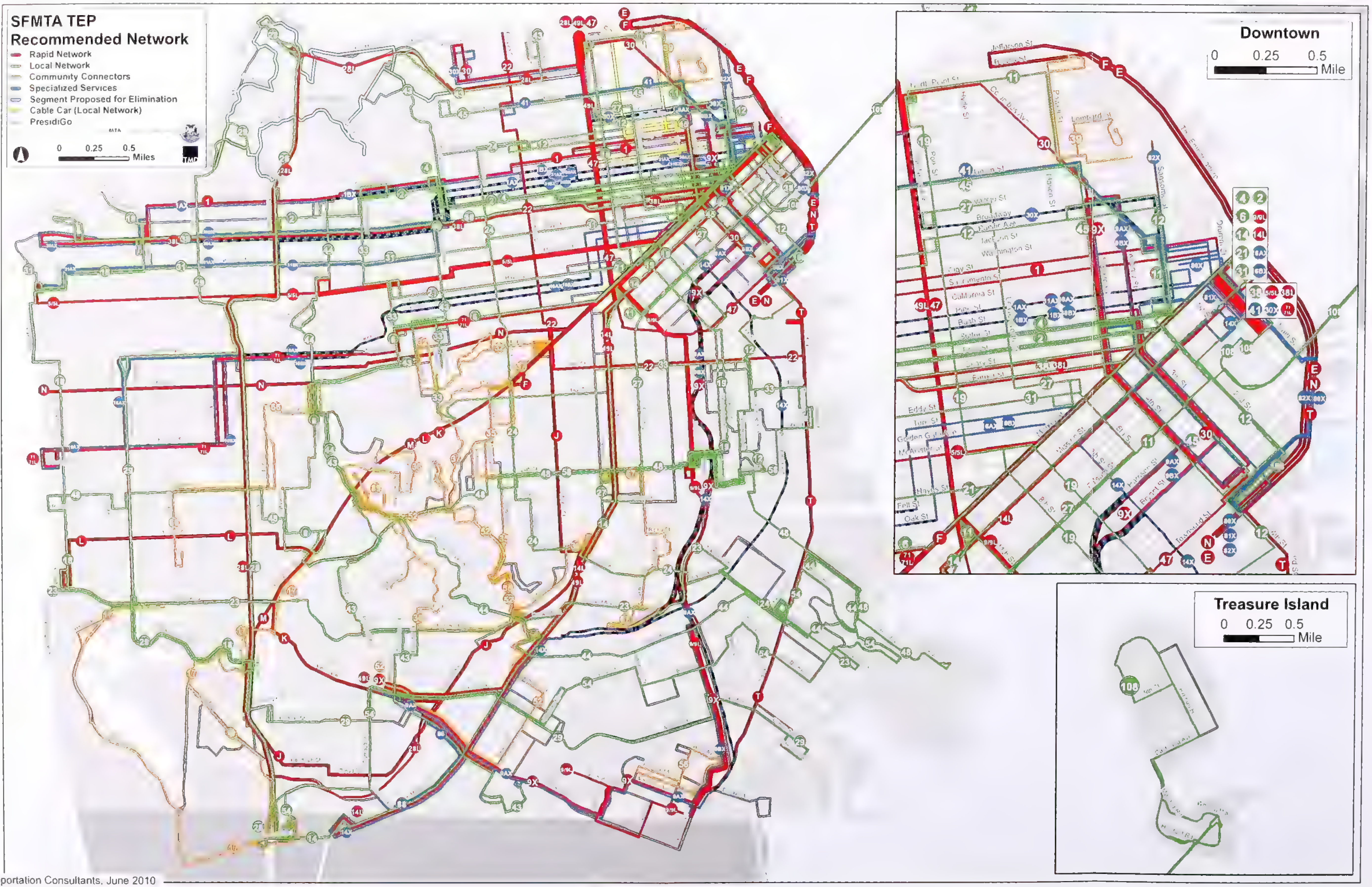
Alternative C includes themes and concepts raised during the Draft 2009 Housing Element process that were not included in the Draft 2009 Housing Element. Alternative C themes focus on Transit-Oriented Development, balancing growth with available infrastructure, utilization of City-owned vacant or underused sites, encouraging family-sized housing, comprehensive neighborhood planning to accommodate the need for housing, and public outreach around the housing planning process. Additionally, Alternative C would actively encourage housing in new commercial or institutional projects and housing projects near major transit lines. Alternative C explores the following concepts:

1. Allow for limited expansion of allowable building envelope for those who provide family-size units in onsite affordable housing;
2. Require development to full allowable building envelope under zoning in locations that are directly on the rapid transit network lined identified in the SFMTA's Transportation Effectiveness Project (TEP), as shown in Figure VII-1;
3. Grant a Height and/or density bonus for development that exceeds affordable housing requirements in locations that are directly on the rapid transit network lines identified in the TEP;
4. Grant a height and/or density bonus for 100 percent affordable housing in all zones except in RH-1 and RH-2 zones; and
5. Grant administrative exceptions (i.e., without a hearing by the Zoning Administrator) for required parking spaces if the development is:
    a. In an RH-2 zoning district (or greater);
    b. In an area where additional curb cuts would further exacerbate on-street parking deficits, such as in Residential Parking Program areas; or
    c. On a Transit Preferential Street, as shown in Figure VII-2.

Alternative C would include all policies under the 2009 Housing Element, with the incorporation of policies supporting the above concepts to more aggressively achieve the 2009 Housing Element goals.

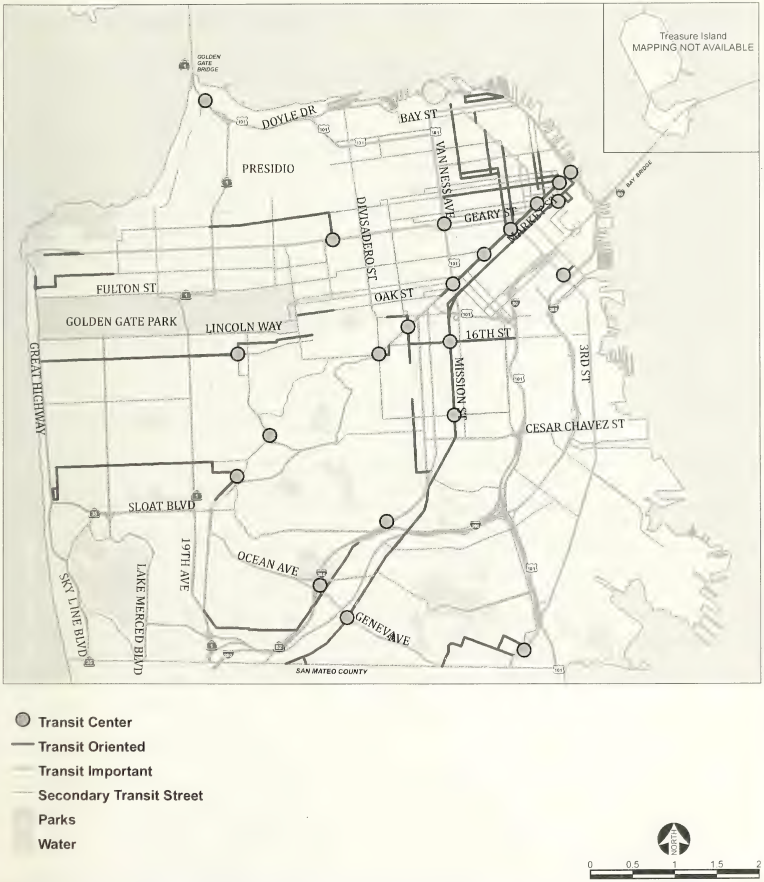
Land Use

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative C would not include any extensions of roadways or other development features through a currently developed area that could physically divide an established community. Areas for future housing development would occur primarily as infill or at individual parcels as most future housing development would take place in established neighborhoods. With respect to division of a community, Alternative C would be similar to the 2004 Housing Element and 2009 Housing Element by encouraging additional residential growth in established areas within an established land use plan and there would be ***no impact***.



Source. TJKM Transportation Consultants, June 2010

Figure VII-1
Muni Transit Effectiveness Project Rapid Transit Network



Source: San Francisco General Plan, Transportation Element, Map 9, June 2010.

Figure VII-2
Muni Transit Preferential Streets Network

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, development under Alternative C would be subject to existing Area Plans and Redevelopment Plans and would serve to complement the policies and land uses in an Area Plan or Redevelopment Plan. Additionally, Alternative C would not conflict with any regional land use policies, the Regional Transportation Plan, or prevailing local plans, including BCDC policies, San Francisco planning policies (General Plan, Countywide Transportation Plan, MTA Strategic Plan, Bicycle Plan, and Urban Forest Plan). Alternative C could potentially result in larger buildings and encourage more higher density housing, although housing would remain within projections. The 2004 Housing Element encourages new housing in Downtown, in underutilized commercial and industrial areas, and increased housing in neighborhood commercial districts and mixed use districts near Downtown. In locations where new housing could create land use conflicts, such as formerly industrial areas, the greater density supported by Alternative C could incrementally exacerbate conflicts. Therefore, impacts to land use conflicts could be incrementally greater under Alternative C than the 2004 and 2009 Housing Elements. However, similar to the 2004 and 2009 Housing Elements, overall these impacts would be ***less than significant.***

Aesthetics

2004 and 2009 Housing Elements Comparison

Alternative C promotes increased density and building mass to a greater extent than the 2004 and 2009 Housing Elements. Therefore, taller residential buildings, which accommodate higher densities of residential uses, could be constructed, resulting in incrementally greater potential impacts to scenic vistas. This would increase the potential for new development on vacant or undeveloped parcels or redevelopment of underutilized parcels that could affect existing natural features (and scenic resources) as compared to the 2004 and 2009 Housing Elements. Under Alternative C, increased density would be promoted, potentially resulting in an increase in light and glare from new sources. This impact could be incrementally greater than under the 2004 and 2009 Housing Elements, but the increase would not be expected to be sufficient to result in a significant impact. Similar to the 2004 and 2009 Housing Elements, impacts from Alternative C would be ***less than significant.***

Population and Housing

2004 Housing Element Comparison

Housing development under Alternative C would be greater than under the 2004 Housing Element. Therefore, impacts due to increased density would be greater. However, similar to the 2004 Housing Element, residential development in the City would occur regardless under Alternative C. Alternative C, while allowing for growth, would more effectively meet the need for housing at all income levels as outlined in the most current RHNA and this impact would be less than under the 2004 Housing Element.

Similar to the 2004 Housing Element, Alternative C encourages housing on public lands and in secondary units, and would promote housing opportunities that would avoid displacement of existing or affordable housing. This impact would be the same as under the 2004 Housing Element. The purpose of the 2004 Housing Element is to address housing supply; housing retention; housing condition; housing affordability; housing choice; homelessness; housing density, design, and quality of life; and regional and state housing needs. Alternative C would promote affordable housing and would meet effectively meet regional and state housing needs. Therefore, impacts under Alternative C to housing supply would be less than under the 2004 Housing Element.

2009 Housing Element Comparison

Density under Alternative C would be more than under the 2009 Housing Element. Therefore, impacts due to increased density would be greater. However, similar to the 2009 Housing Element, residential development in the City would occur regardless under Alternative C. Alternative C would meet the need for housing at all income levels as outlined in the most current RHNA and this impact would be less than under the 2009 Housing Element. The 2009 Housing Element identifies housing sites adequate to meet the RHNA; directs housing near and around transit lines, and allow for expansion of building envelopes for projects providing affordable family-size units. Alternative C would not ensure adequate housing sites to the extent that would occur under the 2009 Housing Element and this impact would be less than under the 2009 Housing Element.

Cultural Resources

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements Alternative C could result in a substantial adverse change to a historical resource by promoting inappropriate alterations and/or additions, inappropriate new construction, and demolition by neglect. Similar to the proposed 2004 and 2009 Housing Elements, Alternative C would not directly result in the construction of residential units, but it could direct housing to locations where residential growth is appropriate, promote the retention of existing housing, and encourage provision of affordable housing in accordance with the City's needs. This could result in inappropriate alterations, additions, or new construction. In addition to impacts to individual properties, cumulative impacts could arise in these areas over the course of time thereby diminishing the historic significance of the area.

However, similar to the 2004 and 2009 Housing Elements, Alternative C would recognize the need to preserve landmark and historic buildings through review and criteria. Impacts to landmark and historic buildings would be greater under Alternative C than under the 2004 Housing Element due to the potential increase in residential projects. Additionally, this impact would be increased under Alternative C in comparison to the 2009 Housing Element due to the potential increase in residential projects. Overall, Alternative C would encourage more residential projects and larger buildings; therefore, impacts to historic buildings would be greater than under the 2004 and 2009 Housing Elements, although still less than significant.

Similar to the 2004 and 2009 Housing Elements, Alternative C could result in a substantial adverse change to an archeological or paleontological resource by increasing potential to result in deep foundations or soil improvements, soils disturbance, or directing housing to areas with high potential for archeological deposits near the existing surface. This impact would be greater than under the 2004 Housing Element. Even though both contain policies that could increase the potential to result in deep foundations or soil improvements, disturb soils in areas where archeological resources are close to the existing surface and direct housing to areas where archeological sites are concentrated, Alternative C could encourage the construction of larger buildings. This impact would also be greater under Alternative C than under the 2009 Housing Element. Although both promote policies with the potential to result in deep foundations or soils improvements and direct housing to areas where archeological sites are heavily concentrated Alternative C would encourage the construction of more projects and larger buildings. Overall, Alternative C would result in greater impacts to archaeological resources as compared to the 2004 and 2009 Housing Elements due to the fact that more and larger projects would require more excavation.

Similar to the 2004 and 2009 Housing Elements, Alternative C would have the potential to disturb human remains. This impact could be incrementally greater due to the increase in housing units that could potentially be constructed. Overall, impacts to cultural resources under Alternative C would be greater to the 2004 and 2009 Housing Elements, although still less than significant.

Transportation and Circulation

2004 and 2009 Housing Elements Comparison

Table VII-3, below, categorizes these concepts by their potential to: (1) direct growth to particular locations within the city, (2) affect parking, and (3) increase residential density.

Table VII-3
Alternative C Concepts

Housing Concept	Direct Growth	Affect Parking	Increase Residential Density
1. Allow for limited expansion of allowable building envelopes for those who provide family-size units in onsite affordable housing.			X
2. Requirement for development to fully build to the allowable building envelope under zoning in locations that are directly on the Rapid transit network lines identified in the TEP.	X		X
3. Height and/or density bonus for development that exceeds affordable housing requirements in locations that are directly on the Rapid transit network lines identified in the TEP.	X		X
4. Height and/or density bonus for 100% affordable housing in all zones except in RH-1 and RH-2 zones.	X		X
5. Granting of administrative variances (i.e. over-the-counter) for parking spaces required for additional units if the development is: a. in an RH-2 zoning district (or greater), b. in an area where additional	X	X	X

Table VII-3
Alternative C Concepts

Housing Concept	Direct Growth	Affect Parking	Increase Residential Density
curb cuts would further exacerbate on-street parking supply, such as in Residential Parking Program areas, or c. on a Transit Preferential Street.			

Notes: [1] *It is acknowledged that increasing density could affect local parking conditions, however, policies that specifically encourage increased density, yet maintain existing parking requirements, were not determined to have an effect on parking because off-street parking would continue to be supplied as determined by Planning Code requirements.*

Growth in Certain Areas

Alternative C analyzes additional housing element concepts designed to further encourage attainment of the City's housing needs. With respect to directing growth, Alternative C concepts more aggressively encourage increased residential development along transit lines and generally throughout the City. Similar to the 2004 and 2009 Housing Element, Alternative C includes additional policies that would direct growth to certain areas of the City to a greater degree than the 1990 Residence Element. While Alternative C concepts 2 and 3 specifically direct growth along transit lines, concepts 4 and 5 direct growth more generally throughout the City. Concepts 2 and 3 could result in an overall mode shift towards transit for those developments located along transit lines. It is therefore anticipated that under Alternative C, a greater amount of future residential growth would be located along transit, potentially reducing citywide vehicle trips. Without these policies, it is more likely that the 37 intersections anticipated to operate at unacceptable levels of service under future 2025 Cumulative Conditions would continue to operate unacceptably.

Alternative C would promote residential growth in proximity to transit lines more so than the 2004 and 2009 Housing Element and the No Project Alternative. The analysis of the 2004 and 2009 Housing Element found that impacts to transit would be potentially significant because the 2004 and 2009 Housing Elements include policies that could result in a mode shift towards transit. Under 2025 Cumulative Conditions the California and Subway transit corridors are anticipated to operate near Muni's capacity utilization standard of 85 percent. The analysis of the 2004 and 2009 Housing Element policies found that increased transit ridership may exceed Muni's capacity utilization standard and that given SFMTA's current fiscal emergencies, SFMTA may not be able to respond with increased transit service, therefore this impact was found to be potentially significant. Given that Alternative C would include policies that could promote housing in proximity to transit more so than the 2004 and 2009 Housing Elements, Alternative C would similarly result in a ***potentially significant*** impact to the City's transit system.

Parking Provisions

Similar to the 2004 Housing Element, Alternative C would allow for reduced parking requirements under specified conditions. Compared to the 2009 Housing Element, Alternative C would allow for parking exemptions, while the 2009 Housing Element generally would not. Therefore, Alternative C would fall in between the 2004 and 2009 Housing Element effects related to parking provisions. As discussed in the TIS, a reduced parking requirement is a strategy to shift modes of transportation to transit, bicycling or walking. It is therefore anticipated that Alternative C could result in a greater portion of future residential trips shifting to alternative transportation modes based on reduced parking requirements than the 2009 Housing Element, and to a similar degree as the 2004 Housing Element policies. Any shift in transportation modes from vehicles to transit, bicycling or walking would be consistent with the City's Transit First Policy. However, as discussed above, any shift in transportation modes to transit could result in potentially significant impacts to the City's transit system under 2025 Cumulative Conditions. Therefore, transit impacts resulting from Alternative C could be ***potentially significant***.

Residential Density Provision

Alternative C is intended to encourage greater attainment of new residential units to meet the City's housing needs. Therefore Alternative C, concepts 1-5 are designed to result in increased residential density as compared to the 2004 and 2009 Housing Elements. As discussed in the TIS, increased residential density is correlated with reduced auto ownership and reduced VMT, resulting in overall beneficial impacts to the City transportation network. Therefore, Alternative C would result in greater beneficial impacts to the City roadway network than the 2004 and 2009 Housing Elements. However, as discussed above, any subsequent shift to transit could result in ridership that exceeds Muni's capacity utilization standard under 2025 Cumulative Conditions. Therefore, transit impacts resulting from Alternative C could be ***potentially significant***.

Conclusion

As discussed above, Alternative C can be expected to result in an overall decrease in citywide vehicle trips as compared to the 2004 and 2009 Housing Elements because Alternative C generally encourages greater residential density throughout the City, reduced parking requirements, and increased density along transit lines as compared to the 2004 and 2009 Housing Elements. Therefore, the effects of future development on the roadway network would not be expected to exceed 2025 Cumulative Conditions. Furthermore, the Alternative C does not propose any new residential development, and would therefore, not generate any new person.

Alternative C contains more aggressive policies that could encourage a greater shift towards alternative transportation, including transit. Therefore, similar to the 2004 and 2009 Housing Element, Alternative C could result in increased ridership that may exceed available transit capacity under 2025 Cumulative Conditions, resulting in ***potentially significant*** impacts to the City's transit system. Alternative C would have no impact on citywide pedestrian or bicycle facilities, loading areas, emergency vehicle access, or impacts from construction for the same reasons as the 2004 and 2009 Housing Elements.

Noise

2004 and 2009 Housing Elements Comparison

Similar to the 2004 Housing Element and 2009 Housing Element, the City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. Therefore, Alternative C would have ***no impact*** with respect to airport noise.

Incentives provided under Alternative C would promote new housing development and, therefore, a temporary increase in noise-generating activity associated with construction. This impact although incrementally greater than under the 2004 Housing Element would not be significant. Both Alternative C and the 2004 and 2009 Housing Elements recognize the need for the retention and maintenance of existing housing, and therefore do not represent a shift in policy. Therefore, similar to the 2004 Housing Element, impacts from exposure of people to or generation of excessive groundborne vibration or groundborne noise would be less than significant. Alternative C could promote the placement of housing in industrial and commercial areas and along transit lines and could increase housing density, housing construction, and housing in non-residential areas compared to the 2004 and 2009 Housing Elements resulting in the exposure of people to more noise. Therefore, impacts from the potential to expose people to or generate excessive noise levels or result in a substantial permanent increase in ambient noise levels would be greater than under the 2004 and 2009 Housing Elements. However, building construction regulations including Title 24, would reduce interior noise levels and this impact would not be significant.

Alternative C would promote housing construction on in-fill sites in industrial and commercial areas to the same extent as the2004 and 2009 Housing Elements. The ability to expand building envelopes might encourage development on opportunity sites. Therefore, Alternative C would result in the potential for exposing residents to higher noise levels associated with these types of non-residential uses; therefore, this impact could be incrementally more than under the 2004 and 2009 Housing Elements. Noise impacts under Alternative C could be incrementally more due to the increase in housing density, housing construction, and exposure of people to non-residential noise sources due to the increased promotion of density. As with the 2004 and 2009 Housing Elements, compliance with Title 24 may not mitigate exterior noise on private open space or other site-specific conditions may warrant acoustical monitoring and analysis beyond that required for Title 24 compliance. Therefore, as with the 2004 and 2009 Housing Elements, Alternative C would result in a significant impact with respect to exposing noise sensitive receptors to noise levels in excess of established standards and promoting residential development that may be substantially affected by existing noise levels. Compliance with Mitigation Measure M-NO-1 would reduce Alternative C's impact on noise sensitive receptors to ***less than significant with mitigation***, similar to the 2004 and 2009 Housing Elements. Overall, these impacts would be greater than noise impacts under the 2004 and 2009 Housing Elements, but would remain ***less than significant with mitigation.***

Air Quality

Consistency of the proposed Housing Elements with regional air quality plans can be determined by comparing the growth factors used to generate the City's RHNA allocation with those used in the most recently adopted regional air quality plan, the Bay Area 2005 Ozone Strategy. The 2005 Ozone Strategy growth assumptions for Bay Area communities are based on ABAG's Projections. The Housing Elements are based on the Regional Housing Needs Allocation (RHNA) evaluation. This RHNA, in turn, is based on ABAG population projects. As both the 2004 and 2009Housing Elements and the 2005 Ozone Strategy utilize ABAG projections, the2004 and 2009 Housing Elements would not result in a significant impact on regional air quality planning efforts.

Although the 2004 and 2009 Housing Elements would not result in the construction of residential units, 2004 and 2009 Housing Elements policies could contribute to an existing or projected air quality violation by promoting increased density in certain areas of the City, thereby consolidating new construction within those areas. Alternative C would promote increased density over the 2004 and 2009 Housing Elements. Increased density standards under the 2004 and 2009 Housing Elements could promote longer construction durations associated with construction of buildings containing a greater number of units, which could result in an increase in construction emissions for the construction project. Therefore, impacts from construction emissions could be incrementally greater under Alternative C.

However, as Alternative C would encourage more housing units and larger buildings near transit than either the 2004 or 2009 Housing Elements it could therefore incrementally reduce impacts to air quality, including CO concentrations due to an decrease in Vehicle Miles Traveled. Similar to the 2004 or 2009 Housing Elements, Alternative C would not expose residents to TACs because all future housing units would be required to undergo review of new housing projects consider the location of industrial sites or other sources of air pollution in the design of the residential building, to orient air intake away from the sources of pollution. Similar to the 2004 and 2009 Housing Elements, Alternative C would encourage the construction of housing and would not result in the creation of objectionable orders. Overall, impacts to air quality under Alternative C would be incrementally reduced than under the 2004 and 2009 Housing Elements due to potential decreases in Vehicle Miles Traveled. However, this impact would still be less than significant.

Greenhouse Gases

2004 Housing Element Comparison

Both Alternative C and the 2004 Housing Element include policies that would ultimately result in reduced GHG emissions by encouraging: (1) housing in proximity to job cores, neighborhood services, and/or transit; (2) increased housing density; (3) infill development; (4) preservation of existing housing stock; and (5) energy efficiency. However, Alternative C would encourage a greater number of projects and larger buildings, which would therefore result in more energy savings than the 2004 Housing Element. Given that Alternative C would reduce GHG more than the 2004 Housing Element, this impact would be incrementally less than under the 2004 Housing Element.

2009 Housing Element Comparison

Both Alternative C and the 2009 Housing Element include policies that would ultimately result in reduced GHG emissions. These policies include providing housing: (1) in proximity to job cores, neighborhood services, and/or transit; (2) by increasing housing density; (3) encouraging infill development; (4) preservation of existing housing stock or adaptive reuse of existing buildings; and (5) promoting energy efficiency. Each of these strategies could result in GHG emissions reductions. However, Alternative C would promote a greater number of projects and larger buildings, as compared to the 2009 Housing Element. Both Alternative C and the 2009 Housing Element include policies that promote infill development, preservation the City's existing housing stock, and energy efficiency of new development, although Alternative C would do so to a greater extent. Therefore, overall impacts from Alternative C would be incrementally less than the 2009 Housing Element, although less than significant.

Wind and Shadow

2004 and 2009 Housing Elements Comparison

Alternative C promotes increased density and, in certain areas, building heights compared to the 2004 Housing Element. Taller buildings have the potential to increase ground-level wind acceleration, thereby resulting in possible wind impacts. However, any increased building heights attributable to Alternative C would not be expected to be sufficient to exceed the City's wind hazard criterion level. More over, wind impacts are project-specific and projects would be subject to the Planning Department's procedures requiring modification of any new building or addition that exceeds the wind hazard criterion. New residential units would comply with the previously discussed federal, state, and local regulations including Sections 147, 148, 243(c)(9), 249.1(b)(2), and 263.11(c) of the San Francisco Planning Code. While the potential for Alternative C to result in significant unavoidable impacts is remote, such impacts could occur. Alternative C would therefore result in significant shadow impacts which could be mitigated through the ability to limit approval of projects that would result in shadow impacts. Therefore, this impact would be the same as the 2004 and 2009 Housing Elements and would have a ***less than significant*** impact with respect to the alteration of wind patterns.

Alternative C promotes some increased building heights compared to the 2004 and 2009 Housing Elements incrementally increasing the potential for shading of parks or other protected locations. This could result in a significant shadow impacts that would not otherwise occur. These impacts would be reduced or avoided as a result of the City review efforts. However, shadow impacts are project-specific and all applications for new construction or additions to existing buildings above 40 feet in height are reviewed by the Planning Department to determine whether such shading might occur if a project would result in new shadow, that shadow is evaluated for significance under CEQA. Furthermore, new residential units would comply with the previously discussed federal, state, and local regulations including Sections 146(a), 146(c), and 295 of the San Francisco Planning Code. Therefore, this impact would be the same as the 2004 and 2009 Housing Elements and would have a ***less than significant*** impact with respect to the creation of new shadows.

Recreation

2004 and 2009 Housing Elements Comparison

Similar to the 2004 Housing Element and 2009 Housing Element, Alternative C would not directly increase the use of recreational facilities because it would not directly result in population growth. However, the potential for secondary effects resulting from new housing related to physical deterioration resulting from population increases and/or use attributable to the proposed projects could occur under Alternative C. The City currently has a ratio of 7.0 acres of open space per 1,000 San Francisco residents and the City has not established a citywide target ratio of parkland to residents, nor has it adopted a Quimby Act ordinance. Alternative C would not generate new development. Many open space acquisitions/expansions have been identified by the Planning Department and San Francisco Recreation and Park Department, independent of Alternative C and the proposed Housing Elements. Furthermore, SFRPD would continue to acquire new open space/recreation facilities pursuant to Proposition C. New development would be required to comply with Planning Code requirements for open space.

Implementation of Alternative C could result in impacts related to an adverse physical effect on the environment due to the construction or expansion of recreational facilities in underserved areas, potentially requiring new or expanded facilities. Alternative C would more aggressively promote increased density and direct growth to certain areas of the City, including on transit lines. Alternative C would also encourage family sized units, resulting in increase use of some types of facilities. However, it is not foreseeable to expect that the impact would be substantial. The increased promotion of density and direction of growth to certain areas could increase the potential for greater use of public recreation facilities, accelerating deterioration or creating the need for new facilities. Any such impacts under Alternative C therefore would be expected to be incrementally greater than under the 2004 Housing Element. Although, similar to the 2004 and 2009 Housing Elements this impact would be ***less than significant***.

Utilities and Service Systems

2004 and 2009 Housing Elements Comparison

Although the 2004 Housing Element and 2009 Housing Element would not result in the construction of residential units, all new development would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Any construction that could occur under the proposed Housing Elements would be within treatment/service projections and would not result in an exceedance of wastewater treatment requirements. Additionally, the NPDES Phase I and Phase II requirements would regulate discharge from construction sites. All new development would be required to comply with all applicable wastewater discharge requirements issued by the State Water Resources Control Board (SWRCB) and RWQCB. . Therefore, similar to the 2004 and 2009 Housing Element, Alternative C would have ***no impact*** with respect to the exceedance of wastewater treatment requirements.

According to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste to recycling facilities from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000. As of 2006, the most recent year for which Board-reviewed rates are available, the City achieved a diversion rate of 70 percent. Therefore, similar to the 2004 and 2009 Housing Element, Alternative C would have ***no impact*** related to compliance with solid waste statutes and regulations

New housing construction in industrial and commercial areas could result in an inadequate type and level of wastewater service capacity due to the introduction of new land uses. Alternative C would result in larger buildings, which could create greater density, potentially resulting in a greater number of people requiring water or wastewater treatment service as compared to the 2004 Housing Element and 2009 Housing Element. However, similar to the 2004 Housing Element and 2009 Housing Element, all new development would be required to comply with the previously discussed federal, state, and local regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, Water Quality Protection Program, the City's Stormwater Management Plan, the City's Construction Site Runoff Pollution Prevention Program requirements, and forthcoming SFPUC development and redevelopment guidelines. Therefore, impacts to wastewater service capacity from Alternative C would be similar, but incrementally greater than the 2004 Housing Element and 2009 Housing Element due to the decrease in housing units.

Construction associated with housing could potentially result in an increase of impervious surfaces on sites that could increase the rate of runoff, exceeding the capacity of stormwater drainage facilities. This increase in impervious surfaces could be greater than under the 2004 Housing Element and 2009 Housing Element; therefore, this impact would be incrementally increased. Alternative C would increase housing construction over the 2004 Housing Element and 2009 Housing Element, and would increase the demand for water supply as compared to the 2004 Housing Element and 2009 Housing Element. However, all new development would be required to comply with federal, state, and local regulations, including the City's Green Building Ordinance, Water Supply Availability Study, North Basin Groundwater Management Plan, WSIP, Article 21 of the San Francisco Public Works Code, and the Residential Water Conservation Ordinance. Therefore, impacts from impervious surfaces and water supply from Alternative C would be similar, although incrementally greater than the 2004 Housing Element and 2009 Housing Element due to the increased promotion of density.

New housing constructed under Alternative C would require solid waste disposal. Similar to the 2004 Housing Element and 2009 Housing Element, additional collection trucks and personnel could be required to provide services to new housing. However, similar to the 2004 Housing Element and 2009 Housing Element, all new development would be required to comply with the previously discussed state and local regulations, including the City's Green Building Ordinance, Ordinance No. 27-06, and the Mandatory Recycling and Composting Ordinance (all of which contribute to the City's goal of zero waste by 2020). Therefore, impacts to solid waste disposal from Alternative C would be similar, although incrementally greater than the 2004 Housing Element and 2009 Housing Element due to the increase in housing units.

Similar to the 2004 Housing Element, an increase in housing density would likely be achieved by a shift to multi-family housing, which uses less energy than single-family housing. Therefore, impacts to energy usage from Alternative C would be similar, but incrementally greater than the 2004 Housing Element and 2009 Housing Element due to the increase in housing units. Overall, impacts to utilities and service systems would be similar to and ***less than significant*** than the 2004 Housing Element and 2009 Housing Element.

Public Services

2004 and 2009 Housing Elements Comparison

Under Alternative C, increased density and housing construction could potentially result in an increase in the number of people requiring fire protection or police services by 2014or a change in the level of service required. Similar to the 2004 and 2009 Housing Elements, Alternative C could result in new housing resulting in a need for school services; it would not be expected that this increase would be sufficient to require new facilities because the SFUSD has surplus capacity. Additionally, Alternative C could result in the need for public libraries or public health facilities in areas that are underserved and other areas that could not accommodate additional growth, thereby requiring the construction or expansion of libraries or public health facilities. This impact could be incrementally increased under Alternative C due to the increased promotion of density. Therefore, impacts to public services from Alternative C would be similar, but incrementally greater than under the 2004 and 2009 Housing Elements due to the increase in housing units. Overall, impacts to utilities and services systems from Alternative C would be similar to the 22004 and 2009 Housing Elements and ***less than significant***.

Biological Resources

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements, Alternative C could result in impacts related to biological resources if new projects result in disturbance from construction activities, tree removal, construction on or near wetlands or sensitive habitats or riparian areas, interference with migration, take of special status-species (e.g, development/redevelopment of abandoned buildings that provide habitat for bats could impact those species), application of pesticides and herbicides, construction of tall buildings with glass walls that could increase bird strikes and possibly interrupt a migration corridor, and conflict with provisions of an adopted habitat conservation plan.

These impacts could be incrementally increased under Alternative C due to the increased promotion of density from development of larger buildings and/or more sites. However, all housing constructed under Alternative C would be required to comply with the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code, San Francisco's Green Building Ordinance, San Francisco's IPM Ordinance, San Francisco's Urban Forest Plan, and San Francisco's Urban Forestry Ordinance, which would reduce impacts related to biological resources. Therefore, while overall impacts to biological resources under Alternative C would be greater than under the 2004 and 2009 Housing Elements, similar to the 2004 and 2009 Housing Elements, impacts would be ***less than significant***.

Geology and Soils

2004 and 2009 Housing Elements Comparison

The San Francisco Bay Area and surrounding areas are characterized by numerous geologically young faults. However, there are no known fault zones or designated Alquist-Priolo Earthquake Fault Zones in the City. Therefore, there would be ***no impact*** with respect to rupture of a known earthquake fault under Alternative C. Additionally, development under Alternative A would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, there would be ***no impact*** with respect to septic tanks or alternative wastewater disposal systems under Alternative C.

Similar to the 2004 and 2009 Housing Elements, new development under Alternative C could expose people and structures to geologic risks, including from rupture of a known earthquake fault, groundshaking, ground failure, or liquefaction. Additionally, housing development could be located on expansive or unstable ground, or on or near an earthquake fault, or areas prone to landslides. New housing could also increase density in especially geologically hazardous areas or for housing units not constructed or maintained in a seismically sound manner. In addition, increasing density could result in heavier buildings, which could increase the weight on soil beyond what it has previously experienced. Alternatively, Alternative C would potentially make it easier to retrofit "soft story" buildings because it would be easier to obtain parking exceptions, which would reduce seismic risks. However, federal, state, and local regulations have been adopted to reduce impacts from seismic hazards. These regulations include the San Francisco Building Code (SFBC), Earthquake Hazards Reduction Act, Alquist-Priolo Earthquake Fault Zoning Act, and Seismic Hazards Mapping Act of 1990. The State of California provides minimum standards for building design through the CBC, including standards that must be met for construction on expansive soils. This impact would be increased under Alternative C due to the increased promotion of density. However, similar to Alternative C, this impact would be less than significant.

Housing constructed under Alternative C could result in soil erosion through the need for grading activities. All new development would be required to comply with federal, state, and local regulations, including State and City Building Codes that include regulations that have been adopted to reduce impacts from grading and erosion. This impact would be increased under Alternative C due to the increased promotion of density. However, similar to Alternative C, this impact would be less than significant.

Similar to the 2004 and 2009 Housing Elements, Alternative C could require grading activities that have the potential to substantially change the topography or any unique geologic or physical features on project sites. However, grading impacts are project-specific and could be potentially reduced under Alternative C, which would allow for reduced parking and might eliminate the need for excavation for parking garages. All grading and building permit applications for new construction or additions to existing buildings would be reviewed by the Planning Department to determine whether grading activities might occur with the potential to substantially change the topography of a project site. Furthermore, as part of the permitting process, construction activities for new residential units would be required to comply with the Building Code related to grading and excavation activities and project design plans would be subject to review by the City's Planning Department for consistency with policies related to land alteration. This impact would be increased under Alternative C due to the increased promotion of density. However, similar to Alternative C, this impact would be less than significant. Overall, impacts to geology and soils from Alternative C would be similar to the 2004 and 2009 Housing Elements and ***less than significant***.

Hydrology and Water Quality

2004 and 2009 Housing Elements Comparison

The following discussion evaluates the potential hydrology and water quality impacts of Alternative C compared to the proposed Housing Elements.

Similar to the 2004 and 2009 Housing Elements, Alternative C would result in increased density and housing construction, potentially resulting in the need for construction activities (that could result in site dewatering activities), increase in demand for wastewater treatment, or increase in the rate or quality of runoff. Additionally, Alternative C could result in construction associated with housing that would potentially alter existing drainage patterns by through grading and construction activities. This impact could be incrementally increased in comparison to the2004 and 2009 Housing Elements due to the larger number of housing units that might be constructed. However, similar to the 2004 and 2009 Housing Elements, development under Alternative C would be required to comply with the previously discussed federal, state, and local regulations, including Article 4.1 of the San Francisco Public Works Code and the City's industrial waste pretreatment program to regulate the discharge of pollutants into the sewage system, Water Quality Protection Program, the City's Stormwater Management Plan, the City's Construction Site Runoff Pollution Prevention Program requirements that are described in the City's Construction Site Water Pollution Prevention Program, and forthcoming SFPUC development and redevelopment guidelines. Therefore, similar to the 2004 and 2009 Housing Elements, impacts with respect to violation of any water quality standards, waste discharge requirements, or quality of runoff would be less than significant.

Alternative C would also result in construction of new housing could require dewatering or result in groundwater drawdown. Although Alternative C might encourage more construction during the Housing Element period, it could also result in less excavation for parking areas, potentially reducing the need for dewatering. Similar to the 2004 and 2009 Housing Elements, although short-term construction groundwater dewatering may be necessary at certain locations (e.g., for installation of building foundations or underground utilities), dewatering would have only a minor temporary effect on the groundwater table elevation in the immediate vicinity of the activity, and would not measurably affect groundwater supplies. This impact would be similar to the 2004 and 2009 Housing Elements and less than significant.

Similar to the 2004 and 2009 Housing Elements, Alternative C could result in the construction of housing in 100-year flood hazard areas that would be subject to or could impede or redirect flood flows. However, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with federal, state, and local regulations. Additionally, new construction could result in impacts related to flooding if housing is placed near above ground reservoirs and tanks. This impact would be no different under Alternative C than under the 2004 Housing Element. Therefore, impacts under Alternative C from dam inundation would be similar to the 2004 and 2009 Housing Elements, and would be less than significant.

New construction under Alternative C could result in impacts related to seiche, tsunami, or mudflow if housing is placed near open water, near bodies of water, or near steep slopes in the City. This impact could be incrementally greater under Alternative C than under the 2004 and 2009 Housing Elements due to the greater number of housing units that would be constructed. However, similar to the 2004 and 2009 Housing Elements, all new development would be required to comply with federal, state, and local regulations, including the Department of Building Inspection's approval of the final plans for any specific development; therefore, this impact would be less than significant. Overall, impacts to hydrology and water quality from Alternative C, although increased over the 2004 and 2009 Housing Elements due to the increased promotion of density, would remain ***less than significant***.

Hazards/Hazardous Materials

The City is neither within an airport land use plan area, nor within two miles of a public airport or public use airport, nor within the vicinity of a private airstrip. Therefore, similar to the 2004 Housing Element or 2009 Housing Element, Alternative C would have ***no impact*** with respect to air safety.

2004 and 2009 Housing Elements Comparison

Similar to the 2004 and 2009 Housing Elements Alternative C would result in increased density and housing construction, potentially resulting in the increased transport, use, or disposal of hazardous materials. Similar to the 2004 Housing Element, Alternative C encourages new housing in Downtown, in underutilized commercial and industrial areas, neighborhood commercial districts, and mixed use districts. Additionally, similar to the 2009 Housing Element, Alternative C encourages new housing in commercial and institutional areas and near major transit lines. This could result in construction of housing in areas where hazardous materials are used. However, all new development would be required to comply with federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Additionally, Alternative C could result in incrementally increased impacts from hazardous materials in comparison to the 2004 and 2009 Housing Elements, if more sites containing hazardous materials are developed under Alternative C policies. However, similar to the2004 and 2009 Housing Elements, impacts with respect to the routine transport, use, or disposal of hazardous materials from Alternative C would be less than significant.

Alternative C could result in impacts related to upset and accident conditions because new housing construction could increase transport of hazardous materials for delivery and disposal purposes, which could in turn increase the risk of upset and accident conditions during transport. This impact would be increased from the 2004 and 2009 Housing Elements due to the increased promotion of density. However, if Alternative C results in less excavation from projects providing reduced amounts of parking, the handling, transport, and disposal of hazardous materials could decrease. Additionally, all new development would be required to comply with all applicable federal, state, and local regulations, including the EOP, Hazard Mitigation Plan, San Francisco Public Works Code, All-Hazards Strategic Plan, and San Francisco Public Health Code. Therefore, this impact could be incrementally increased compared to the 2004 and 2009 Housing Elements and similar to the 2004 and 2009 Housing Elements, this impact would be less than significant.

Under Alternative C, housing construction could occur on sites that have been identified as being contaminated from the release of hazardous substances in the soil, including industrial sites, sites containing leaking underground storage tanks, and large and small-quantity generators of hazardous waste. Similar to the 2004 Housing Element, Alternative C encourages new housing in Downtown, in underutilized commercial and industrial areas, neighborhood commercial districts, and mixed use districts. This could result in construction of housing in areas where hazardous materials are used. This impact would be less under Alternative C than under the 2004 Housing Element, due to the smaller/less dense housing projects that might be constructed under Alternative C. Similar to the 2009 Housing Element, Alternative C encourages increased density near major transit lines, which could result in construction of housing in areas where hazardous materials are used or present. This impact would be greater under Alternative C than under the 2009 Housing Element, due to the greater number of housing units constructed. However, similar to the 2004 and 2009 Housing Elements, impacts related to hazardous waste sites are typically project-specific and projects on Brownfield sites would be subject to the review and/or mitigation by the City's SFDPH and/or the applicable regulator of hazardous waste. Specific mitigation measures would be developed in consultation with the SFDPH based on the real or perceived contaminants that may be onsite. This impact would be similar to the 2004 and 2009 Housing Elements and would be less than significant.

Alternative C could locate residents in areas that would result in congestion of an emergency evacuation route. In the event of a natural disaster, increased congestion could slow an evacuation effort within the City. However, the City's ERP, prepared in April 2008, was developed to ensure allocation of and coordination of resources in the event of an emergency in the City. The existing street grid provides ample access for emergency responders and egress for residents and workers, and similar to the 2004 and 2009 Housing Elements, Alternative C would neither directly nor indirectly alter that situation to any substantial degree.

Additionally, Alternative C could result in impacts related to risk associated with fire if new housing is constructed in near areas with potential for wildland fires or if new housing would include certain features that would put residents or workers at risk. San Francisco ensures fire safety primarily through provisions of the San Francisco Building Code and Fire Code. Existing buildings are required to meet standards contained in these codes. All housing constructed under Alternative C, including high-rise residential buildings up to forty stories, would be required to meet standards for emergency access, sprinkler and other water systems, and other requirements specified in the San Francisco Fire Code. Standards pertaining to equipment access would also be met. Plan review for compliance with San Francisco Fire Code requirements, to be completed by DBI and the SFFD, would minimize fire-related emergency dispatches, reducing the demand for fire protection services in the City. This impact would be increased under Alternative C due to the increased promotion of density. Similar to the 2004 and 2009 Housing Elements, impacts would be less than significant. Overall, impacts to hazards and hazardous materials from Alternative C would be increased from the 2004 and 2009 Housing Elements due to the larger number of housing units, but this impact would be ***less than significant***.

Mineral/Energy Resources

The City is not a designated area of significant mineral deposits and no area within the City is designated as a locally-important mineral resource recovery site. Therefore, there would be ***no impact*** related to the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site.

Alternative C could result in greater incentives to redevelop site, which could increase building demolition. Under Alternative C, density (and construction associated with housing) would be promoted to a greater degree than under the 2004 and 2009 Housing Elements, resulting in increased uses of fuel, water, and energy associated with demolition and construction. On the other hand, the promotion of housing near transit opportunities would reduce energy use associated with transportation. All new development would be required to comply with the previously discussed federal, state, and local regulations. Therefore, projects constructed under Alternative C would be required to comply with the Environmental Protection Element of the San Francisco General Plan, San Francisco's Green Building Ordinance, San Francisco Residential Energy Conservation Ordinance, and San Francisco Sustainability Plan. New development would also have the opportunity to participate in voluntary programs, such as GoSolarSF and San Francisco's Green Priority Permitting Program. Therefore, Alternative C would have an incrementally greater impact to mineral/energy resources due to the increased promotion of density. However, similar to the 22004 and 2009 Housing Elements, Alternative C would have a ***less than significant*** impact with respect to the use of large amounts of fuel, water, or energy.

Agricultural Resources

The entire City is identified as Urban and Built-Up Land by the DOC and does not contain any important farmland. The City does not participate in the Williamson Act Program and no land within City boundaries is under Williamson Act contract. Therefore, under Alternative C there would be ***no impact*** related to the direct conversion of Farmland to non-agricultural use, conflict with a Williamson Act contract, or the conversion of Farmland to non-agricultural use due to other changes in the existing environment.

Under Alternative C, there would be no changes to zoning or height and bulk districts. P Districts, which include most of the City's forest and timber resources, would not be at risk for conversion to residential zoning. However, Alternative C could result in impacts related to the loss or conversion of forest land if trees in R districts were removed, damaged, or otherwise physically affected by a new project. However, any project proposed under Alternative C would be required to comply with the San Francisco Planning Code and the required replacement ratios to minimize impacts related to forest resources. Therefore, there would be ***no impact*** related to forest land and timberland zoning or the loss or conversion of forest land.

The SFRPD supports and manages a program of 40 community gardens on City-owned property. Community gardens are allowed on SFRPD lands zoned P District and allowed in all R Districts (RH, RC, RM). New housing could include projects built to the maximum allowable height and bulk capacity, which could block sun on plots currently used for urban farming or community gardens or otherwise physically affect community gardens. Although this impact could potentially increase under Alternative C, the incremental change would not be expected to substantially affect agricultural resources. New housing could also result in development of lots currently used for community gardens. Under Alternative C, there would be no changes to zoning or height and bulk districts and therefore, no new conflicts with existing zoning for agricultural uses. Therefore, impacts under Alternative C would be similar to the2004 and 2009 Housing Elements and ***less than significant***.

Attainment of Project Objectives

The objectives of the proposed Housing Elements are to provide a vision for the City's housing and growth management through 2014; maintain the existing housing stock to serve housing needs; ensure capacity for the development of new housing to meet the RHNA at all income levels; encourage housing development where supported by existing or planned infrastructure, while maintaining existing neighborhood character; encourage, develop and maintain programs and policies to meet projected affordable housing needs; develop a vision for San Francisco that supports sustainable local, regional and state housing and environmental goals; and adopt a housing element that substantially complies with California housing element law as determined by the California Department of Housing and Community Development.

Alternative C themes focus on Transit-Oriented Development, balancing growth with available infrastructure, utilization of City-owned vacant or underused sites, encouraging family-sized housing, comprehensive neighborhood planning to accommodate the need for housing, and public outreach around the housing planning process. Additionally, similar to the 2009 Housing Element, Alternative C would encourage housing in new commercial or institutional projects and housing projects near major transit lines. Overall Alternative C would encourage more housing projects, increase the number of units, including affordable units, result in larger residential buildings, and growth that would be within the projections for the planning horizon (2014).

Alternative C would include all policies under the 2009 Housing Element, with the incorporation of the above themes to more aggressively achieve the 2009 Housing Element goals. Therefore, Alternative C would fully meet the allocation as outlined in the most recent RHNA (which addresses growth through

2041) and ensure capacity for the development of new housing to meet the RHNA at all income levels. Meeting the RHNA is a key objective of the proposed projects. Therefore, Alternative C would attain the key objectives of the proposed projects.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed projects and the alternatives, Section 15126.6 of the *CEQA Guidelines* requires that an "environmentally superior" alternative be selected and the reasons for such a selection disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets the goals or needs of the City.

Table VII-4 summarizes the comparative impacts of each of the alternatives when compared to the proposed Housing Elements. The table lists the level of significance of the impacts of the proposed projects to each environmental topic analyzed in Section V and shows whether the impacts anticipated under each proposed alternative would be lesser, similar, or greater than the proposed Housing Elements. The table provides a comparison of the ability of each alternative to avoid or substantially reduce the significant impacts of the proposed Housing Elements.

As shown in Table VII-4, Alternative A and B would reduce the impacts of the proposed Housing Elements. However neither Alternative A nor B would be expected to achieve the RHNA allocation as effectively as the 2004 or 2009 Housing Elements. Achievement of the RHNA is one of the key objectives of the project, and because of this fact, each alternative would result in greater impacts to population and housing than the proposed projects. However, Alternative B would come closer to meeting the RHNA allocation than Alternative A and would therefore come closer to meeting one of the key objectives of the proposed projects. Alternative A would also result in a potentially significant impact to historic resources. Therefore, Alternative B would be the environmentally superior alternative.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS IN THE EIR

Section 15126.6(c) of the CEQA Guidelines requires an EIR to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. Given the nature of the proposed Housing Elements, an off-site alternative was not feasible.

Bayview Waterfront Alternative: This alternative considers the 1990 Residence Element Objectives, Goals and Policies and assumes the existing land use conditions (same as No Project) plus the effects of the Bayview Waterfront Project. Ultimately, it was determined that the draft EIR analysis adequately considered this proposed project, and that such an alternative would not provide useful new information.

Focused Development Alternative: This alternative considers potential Objectives, Policies and Implementation Measures that could be part of the 2009 Housing Element in tandem with a land use allocation based on existing conditions plus all area planning efforts. This alternative was eliminated from consideration during the process of preparing the Housing Element and this Draft EIR, during which the land use allocation was carefully considered in light of projected development and water supply considerations.

Reduced Land Use Allocation Alternative: This alternative comprises the 2004 Housing Element Objectives, Goals, Policies and Implementation Measures under a land use allocation based on lower total number of new units over the planning period of 2005-2025. This alternative would reflect a reduced total number of new units, and was determined to not meet the 2004 and 2009 RHNA goals and to be inconsistent with regional projections, and was rejected for these reasons.

Table VII-4
Comparison of Alternatives to the Proposed Housing Elements

Environmental Issue Area	Proposed Housing Elements	ALTERNATIVE A No Project/ Continuation of 1990 Residence Element	ALTERNATIVE B 2004 Housing Element–Adjudicated	ALTERNATIVE C 2009 Housing Element–Intensified
Land Use and Land Use Planning	LTS	—	—	+
Aesthetics	LTS	—	—	+
Population and Housing	LTS	+	+	—
Cultural and Paleontological Resources	LTS	+	=	+
Transportation and Circulation	S	+	+	+
Noise	LTS/M	—	—	+
Air Quality	LTS	+	+	—
Greenhouse Gases	LTS	+	+	—
Wind and Shadow	LTS	=	=	=
Recreation	LTS	—	—	+
Utilities and Service Systems	LTS	—	—	+
Public Services	LTS	—	—	+
Biological Resources	LTS	—	—	+
Geology and Soils	LTS	—	—	+
Hydrology and Water Quality	LTS	—	—	+

Table VII-4
Comparison of Alternatives to the Proposed Housing Elements

Environmental Issue Area	Proposed Housing Elements	ALTERNATIVE A No Project/ Continuation of 1990 Residence Element	ALTERNATIVE B 2004 Housing Element–Adjudicated	ALTERNATIVE C 2009 Housing Element–Intensified
Hazards and Hazardous Materials	LTS	—	—	+
Mineral and Energy Resources	LTS	—	—	+
Agricultural and Forest Resources	LTS	=	=	=

Key:

S = Significant Impact

LTS = Less-than-Significant Impact

LTS/M = Less-than-Significant Impact with Mitigation

+ = Impact greater than the proposed Housing Elements

= = Impact similar to the proposed Housing Elements

— = Impact less than the proposed Housing Elements

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REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT
Planning Department Case No. 2007.1275E,
San Francisco 2004 and 2009 Housing Element

Check one box: ☐ Please send me a copy of the Final EIR on CD-ROM.
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2004 & 2009 Housing Element DEIR Appendices